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code of federal regulations

Agriculture

7

PART 52

Revised as of January 1, 1991

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To cite the regulations in this volume use title, part and section number. Thus, 7 CFR 52.1 *refers to title 7, part 52, section 1.*

Explanation

The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The Code is divided into 50 titles which represent broad areas subject to Federal regulation. Each title is divided into chapters which usually bear the name of the issuing agency. Each chapter is further subdivided into parts covering specific regulatory areas.

ISSUE DATES

Each volume of the Code is revised at least once each calendar year and issued on a quarterly basis approximately as follows:

Title 1 through Title 16	as of January 1
Title 17 through Title 27	as of April 1
Title 28 through Title 41	as of July 1
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The appropriate revision date is printed on the cover of each volume.

LEGAL STATUS

The contents of the Federal Register are required to be judicially noticed (44 U.S.C. 1507). The Code of Federal Regulations is prima facie evidence of the text of the original documents (44 U.S.C. 1510).

HOW TO USE THE CODE OF FEDERAL REGULATIONS

The Code of Federal Regulations is kept up to date by the individual issues of the Federal Register. These two publications must be used together to determine the latest version of any given rule.

To determine whether a Code volume has been amended since its revision date (in this case, January 1, 1991), consult the "List of CFR Sections Affected (LSA)," which is issued monthly, and the "Cumulative List of Parts Affected," which appears in the Reader Aids section of the daily Federal Register. These two lists will identify the Federal Register page number of the latest amendment of any given rule.

EFFECTIVE AND EXPIRATION DATES

Each volume of the Code contains amendments published in the Federal Register since the last revision of that volume of the Code. Source citations for the regulations are referred to by volume number and page number of the Federal Register and date of publication. Publication dates and effective dates are usually not the same and care must be exercised by the user in determining the actual effective date. In instances where the effective date is beyond the cut-off date for the Code a note has been inserted to reflect the future effective date. In those instances where a regulation published in the Federal Register states a date certain for expiration, an appropriate note will be inserted following the text.

OMB CONTROL NUMBERS

The Paperwork Reduction Act of 1980 (Pub. L. 96-511) requires Federal agencies to display an OMB control number with their information collection request. Many agencies have begun publishing numerous OMB control numbers as amendments to existing regulations in the CFR. These OMB numbers are placed as close as possible to the applicable recordkeeping or reporting requirements.

OBSOLETE PROVISIONS

Provisions that become obsolete before the revision date stated on the cover of each volume are not carried. Code users may find the text of provisions in effect on a given date in the past by using the appropriate numerical list of sections affected. For the period before January 1, 1986, consult either the List of CFR Sections Affected, 1949-1963, 1964-1972, or 1973-1985, published in seven separate volumes. For the period beginning January 1, 1986, a "List of CFR Sections Affected" is published at the end of each CFR volume.

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A subject index to the Code of Federal Regulations is contained in a separate volume, revised annually as of January 1, entitled CFR INDEX AND FINDING AIDS. This volume contains the Parallel Table of Statutory Authorities and Agency Rules (Table I), and Acts Requiring Publication in the Federal Register (Table III). A list of CFR titles, chapters, and parts and an alphabetical list of agencies publishing in the CFR are also included in this volume.

An index to the text of "Title 3—The President" is carried within that volume.

The Federal Register Index is issued monthly in cumulative form. This index is based on a consolidation of the "Contents" entries in the daily Federal Register.

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REPUBLICATION OF MATERIAL

There are no restrictions on the republication of material appearing in the Code of Federal Regulations.

INQUIRIES AND SALES

For a summary, legal interpretation, or other explanation of any regulation in this volume, contact the issuing agency. Inquiries concerning editing procedures and reference assistance with respect to the Code of Federal Regulations may be addressed to the Director, Office of the Federal Register, National Archives and Records Administration, Washington, DC 20408 (telephone 202-523-3517). Sales are handled exclusively by the Superintendent of Documents, Government Printing Office, Washington, DC 20402 (telephone 202-783-3238).

MARTHA L. GIRARD,
Director,
Office of the Federal Register.

January 1, 1991.

THIS TITLE

Title 7—AGRICULTURE is composed of nineteen volumes. The parts in these volumes are arranged in the following order: Parts 0-26, 27-45, 46-51, Part 52, 53-209, 210-299, 300-399, 400-699, 700-899, 900-999, 1000-1059, 1060-1119, 1120-1199, 1200-1499, 1500-1899, 1900-1939, 1940-1949, 1950-1999, and Part 2000 to end. The contents of these volumes represent all current regulations codified under this title of the CFR as of January 1, 1991.

An alphabetical list of U.S. standards for grades of processed fruits, vegetables and certain other products appears in the Finding Aids section of the volume containing Part 52.

The Food and Nutrition Service current regulations in the volume containing Parts 210-299, include the Child Nutrition Programs and the Food Stamp Program. The regulations of the Federal Crop Insurance Corporation are found in the volume containing Parts 400-699.

All marketing agreements and orders for fruits, vegetables and nuts appear in the one volume containing Parts 900-999. All marketing agreements and orders for milk appear in three volumes containing Parts 1000-1199. Part 900—General Regulations is carried as a note in each of the three volumes containing Parts 1000-1199, and Part 1000—General Provisions of Federal Milk Marketing Orders is carried as a note in each of the two volumes containing Parts 1060-1199, as a convenience to the user.

Redesignation tables appear in the Finding Aids section of several volumes.

For this volume Jim Wickliffe was Chief Editor assisted by Sheli Fleming. The Code of Federal Regulations publication program is under the direction of Richard L. Claypoole, assisted by Alomha S. Morris.

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Title 7—Agriculture

(This book contains Part 52)

SUBTITLE B—REGULATIONS OF THE DEPARTMENT OF AGRICULTURE—(Continued)

Part

CHAPTER I—Agricultural Marketing Service (Standards, Inspections, Marketing Practices), Department of Agriculture—(Continued) 52

Subtitle B—Regulations of the Department of Agriculture

(Continued)

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(Standards, Inspections, Marketing Practices), DEPARTMENT OF AGRICULTURE (Continued)

SUBCHAPTER C—REGULATIONS AND STANDARDS UNDER THE AGRICULTURAL MARKETING ACT OF 1946 (CONTINUED)

Part *Page*

52 Processed fruits and vegetables, processed products thereof, and certain other processed food products 6

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[1] Includes matters within the responsibility of the Federal Grain Inspection Service.

PART 52—PROCESSED FRUITS AND VEGETABLES, PROCESSED PRODUCTS THEREOF, AND CERTAIN OTHER PROCESSED FOOD PRODUCTS [1]

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[1] Among such other processed food products are the following: Honey; molasses, except for stockfeed; nuts and nut products, except oil; sugar (cane, beet, and maple); sirups (blended), sirups, except from grain; tea; cocoa; coffee; spices; condiments.

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52.823 Styles.
52.824 Grades.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.825 Liquid media and Brix measurements.
52.826 Fill of container.
52.827 Recommended minimum drained weights.
52.828 Recommended minimum fill weights.

FACTORS OF QUALITY

52.829 Ascertaining the grade.

52.830 Ascertaining the rating for the factors which are scored.
52.831 Color.
52.832 Uniformity of size.
52.833 Absence of defects.
52.834 Character.

Lot Inspection and Certification

52.835 Ascertaining the grade of a lot.

Score Sheet

52.836 Score sheet.

Subpart—United States Standards for Grades of Canned Cream Style Corn

Identity, Colors, and Grades

52.851 Identity.
52.852 Colors of canned cream style corn.
52.853 Grades of canned cream style corn.

Fill of Container

52.854 Fill of container for canned cream style corn.

Factors of Quality

52.855 Ascertaining the grade.
52.856 Ascertaining the rating for the factors which are scored.
52.857 Color.
52.858 Consistency.
52.859 Absence of defects.
52.860 Tenderness and maturity.
52.861 Flavor.

Lot Inspection and Certification

52.862 Ascertaining the grade of a lot.

Score Sheet

52.863 Score sheet for canned cream style corn.

Subpart—United States Standards for Grades of Canned Whole Kernel (or Whole Grain) Corn

Identity, Color, and Grades

52.881 Identity.
52.882 Color of canned whole kernel (or whole grain) corn.
52.883 Grades of canned whole kernel (or whole grain) corn.

Fill of Container and Drained Weights

52.884 Recommended fill of container.
52.885 Recommended minimum drained weight

Factors of Quality

52.886 Ascertaining the grade.
52.887 Ascertaining the rating for the factors which are scored.
52.888 Color.
52.889 Cut.
52.890 Absence of defects.
52.891 Tenderness and maturity.
52.892 Flavor.

Lot Inspection and Certification

52.893 Ascertaining the grade of a lot.

Score Sheet

52.894 Score sheet for canned whole kernel (or whole grain) corn and canned whole kernel (or whole grain) and vacuum pack corn.

Subpart—United States Standards for Grades of Frozen Whole Kernel (or Whole Grain) Corn

Product Description, Color, and Grades

52.911 Product description.
52.912 Color of frozen whole kernel (or whole grain) corn.
52.913 Grades of frozen whole kernel (or whole grain) corn.

Factors of Quality

52.914 Ascertaining the grade.
52.915 Ascertaining the rating of the factors which are scored.
52.916 Color.
52.917 Absence of defects.
52.918 Tenderness and maturity.

Lot Inspection and Certification

52.919 Ascertaining the grade of a lot.

Score Sheet

52.920 Score sheet for frozen whole kernel (or whole grain) corn.

Subpart—United States Standards for Grades of Frozen Corn-on-the-Cob

Product Description, Styles, Color, Grades

52.931 Product description.
52.932 Styles.
52.933 Lengths.
52.934 Colors of frozen corn-on-the-cob.
52.935 Grades.

Factors of Quality

52.936 Ascertaining the grade of a sample unit.
52.937 Ascertaining the rating for the factors which are scored.
52.938 Color.
52.939 Uniformity of size.
52.940 Development.
52.941 Defects.
52.942 Tenderness and maturity.

Explanations and Methods of Analysis

52.943 Preparation for and evaluation of stages of kernel development.

52.944 Cooking procedure and evaluation of cooked units.

LOT COMPLIANCE

52.945 Ascertaining the grade of a lot.

SCORE SHEET

52.946 Score sheet for frozen corn-on-the-cob.

Subpart—United States Standards for Grades of Canned Cranberry Sauce

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.951 Product description.
52.952 Styles of canned cranberry sauce.
52.953 Grades of canned cranberry sauce.

FILL OF CONTAINER

52.954 Recommended fill of container.

FACTORS OF QUALITY

52.955 Ascertaining the grade.
52.956 Ascertaining the rating for the factors which are scored.
52.957 Color.
52.958 Consistency and texture.
52.959 Absence of defects.
52.960 Flavor and odor.

EXPLANATION

52.961 Explanation of terms.

LOT INSPECTION AND CERTIFICATION

52.962 Ascertaining the grade of a lot.

SCORE SHEET

52.963 Score sheet for canned cranberry sauce.

Subpart—United States Standards for Grades of Dates

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.1001 Product description.
52.1002 Styles of dates.
52.1003 Grades of dates.

FACTORS OF QUALITY

52.1004 Ascertaining the grade.
52.1005 Ascertaining the rating for the factors which are scored.
52.1006 Color.
52.1007 Uniformity of size.
52.1008 Absence of defects.
52.1009 Character.

LOT INSPECTION AND CERTIFICATION

52.1010 Ascertaining the grade of a lot.

SCORE SHEET

52.1011 Score sheet for dates.

Subpart—United States Standards For Grades of Dried Figs

PRODUCT DESCRIPTION, COLOR TYPES, STYLES, SIZES, GRADES

52.1021 Product description.
52.1022 Color types of dried figs.
52.1023 Styles and types of packs of dried figs.
52.1024 Sizes of Style I (a), whole, loose, dried figs.
52.1025 Grades of dried figs.

MOISTURE ALLOWANCES

52.1026 Moisture allowances for grades of dried figs.

DEFECT ALLOWANCES

52.1027 Allowances for defects in dried figs.

DEFINITIONS AND EXPLANATIONS OF TERMS

52.1028 Stages of maturity.
52.1029 Degrees of uniformity of size.
52.1030 Degrees of uniformity of color.
52.1031 Definitions of defects.
52.1032 Degrees of flavor and odor.

WORK SHEET

52.1033 Work sheet for grades of dried figs.

Subpart—United States Standards for Grades of Canned Fruit Cocktail

IDENTITY AND GRADES

52.1051 Product description.
52.1052 Grades.

PROPORTIONS

52.1053 Proportion of fruit ingredient.

LIQUID MEDIA, FILL OF CONTAINER, AND FILL WEIGHTS

52.1054 Liquid media and Brix measurements.
52.1055 Fill of container.
52.1056 Recommended minimum fill weights.

FACTORS OF QUALITY

52.1057 Ascertaining the grade.
52.1058 Ascertaining the rating for the factors which are scored.
52.1059 Clearness of liquid media.
52.1060 Color.
52.1061 Uniformity of size.
52.1062 Absence of defects.
52.1063 Character.

LOT INSPECTION AND CERTIFICATION

52.1064 Ascertaining the grade of a lot.

SCORE SHEET

52.1065 Score sheet.

Subpart—United States Standards for Grades of Fruit Jelly

52.1081 Identity.
52.1082 Types and kinds of jelly.
52.1083 Kinds of fruit jelly—Standardized.
52.1084 Grades of jelly.
52.1085 Recommended fill of container.
52.1086 Determining the grade.
52.1087 Determining the rating for each factor.
52.1088 Consistency.
52.1089 Color.
52.1090 Flavor.
52.1091 Determining the grade of a lot.
52.1092 Score sheet for fruit jelly.

Subpart—United States Standards for Grades of Fruit Preserves (or Jams)

IDENTITY, TYPES, KINDS, AND GRADES

52.1111 Identity.
52.1112 Types of fruit preserves (or jams).
52.1113 Kinds of fruit preserves (or jams) according to Group I or Group II designations.
52.1114 Grades of fruit preserves (or jams).

FILL OF CONTAINER

52.1115 Recommended fill of container.

FACTORS OF QUALITY

52.1116 Ascertaining the grade.
52.1117 Ascertaining the rating for the factors which are scored.
52.1118 Consistency.
52.1119 Color.
52.1120 Absence of defects.
52.1121 Flavor.

LOT INSPECTION AND CERTIFICATION

52.1122 Ascertaining the grade of a lot.

SCORE SHEET

52.1123 Score sheet for fruit preserves (or jams).

Subpart—United States Standards for Grades of Canned Grapefruit

IDENTITY AND GRADES

52.1141 Identity.
52.1142 Grades.

LIQUID MEDIA AND BRIX MEASUREMENTS

52.1143 Liquid media and brix measurements.

FILL OF CONTAINER

52.1144 Fill of container.

DRAINED WEIGHTS

52.1145 Minimum drained weights.

SAMPLE UNIT SIZE

52.1146 Sample unit size.

FACTORS OF QUALITY

52.1147 Ascertaining the grade of a sample unit.
52.1148 Ascertaining the rating for the factors which are scored.
52.1149 Wholeness.
52.1150 Color.
52.1151 Defects.
52.1152 Character.

LOT INSPECTION AND CERTIFICATION

52.1153 Ascertaining the grade of a lot.

SCORE SHEET

52.1154 Score sheet for canned grapefruit.

Subpart—United States Standards for Grades of Frozen Grapefruit

PRODUCT DESCRIPTION AND GRADES

52.1171 Product description.
52.1172 Grades of frozen grapefruit.

FACTORS OF QUALITY

52.1173 Ascertaining the grade.
52.1174 Ascertaining the rating of each factor.
52.1175 Wholeness.
52.1176 Color.
52.1177 Absence of defects.
52.1178 Character.

LOT INSPECTION AND CERTIFICATION

52.1179 Ascertaining the grade of a lot.

SCORE SHEET

52.1180 Score sheet for frozen grapefruit.

Subpart—United States Standards for Grades of Grapefruit Juice

52.1221 Product description.
52.1222 Styles.
52.1223 Color.
52.1224 Definitions of terms.
52.1225 Recommended sample unit size.
52.1226 Grades.
52.1227 Factors of quality and analysis.
52.1228 Requirements for grades.
52.1229 Sample size.
52.1230 Lot requirements.

Subpart—United States Standards for Grades of Canned Grapefruit and Orange for Salad

52.1251 Product description.
52.1252 Styles.
52.1253 Grades.

52.1254 Liquid media and Brix measurements.
52.1255 Fill of container.
52.1256 Minimum drained weights.
52.1257 Sample unit size.
52.1258 Determining the grade of a sample unit.
52.1259 Determining the rating for the factors which are scored.
52.1260 Wholeness.
52.1261 Color.
52.1262 Defects.
52.1263 Character.
52.1264 Determining the grade of a lot.

Subpart—United States Standards for Grades of Grapefruit Juice and Orange Juice (or Orange Juice and Grapefruit Juice)

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.1281 Product description.
52.1282 Types.
52.1283 Styles.
52.1284 Grades.

FILL OF CONTAINER

52.1285 Recommended fill of container.

FACTORS OF QUALITY

52.1286 Ascertaining the grade.
52.1287 Ascertaining the rating for the factors which are scored.
52.1288 Color.
52.1289 Defects.
52.1290 Flavor.

EXPLANATIONS AND METHODS OF ANALYSIS

52.1291 Definitions of terms and methods of analysis.

LOT COMPLIANCE

52.1292 Ascertaining the grade of a lot.

SCORE SHEET

52.1293 Score sheet.

Subpart—United States Standards for Grades of Frozen Concentrated Blended Grapefruit Juice and Orange Juice

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.1311 Product description.
52.1312 Styles of frozen concentrated blended grapefruit juice and orange juice.
52.1313 Grades of frozen concentrated blended grapefruit juice and orange juice.

FILL OF CONTAINER

52.1314 Recommended fill of container.

FACTORS OF QUALITY

52.1315 Ascertaining the grade.
52.1316 Ascertaining the rating for the factors which are scored.
52.1317 Color.
52.1318 Absence of defects.
52.1319 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.1320 Definitions of terms as used in these standards.
52.1321 Explanation of analyses.

LOT INSPECTION AND CERTIFICATION

52.1322 Ascertaining the grade of a lot.

SCORE SHEET

52.1323 Score sheet for frozen concentrated blended grapefruit juice and orange juice.

Subpart—United States Standards for Grades of Canned Grape Juice

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.1341 Product description.
52.1342 Types of canned grape juice.
52.1343 Styles of canned grape juice.
52.1344 Grades of canned grape juice.

FILL OF CONTAINER

52.1345 Recommended fill of container.

FACTORS OF QUALITY

52.1346 Ascertaining the grade.
52.1347 Ascertaining the rating for the factors which are scored.
52.1348 Color.
52.1349 Absence of defects.
52.1350 Flavor.

EXPLANATIONS

52.1351 Explanation of terms.

LOT INSPECTION AND CERTIFICATION

52.1352 Ascertaining the grade of a lot.

SCORE SHEET

52.1353 Score sheet for canned grape juice.

Subpart—United States Standards for Grades of Frozen Leafy Greens

52.1371 Product description.
52.1372 Types.
52.1373 Styles.
52.1374 Definitions of terms.
52.1375 Recommended sample unit sizes.
52.1376 Grades.
52.1377 Factors of quality.
52.1378 Classification of defects.
52.1379 Tolerances for defects.

52.1380 Sample size.
52.1381 Quality requirements.

Subpart—United States Standards for Grades of Extracted Honey

52.1391 Product description.
52.1392 Types.
52.1393 Styles.
52.1394 Definitions of terms.
52.1395 Recommended sample unit sizes.
52.1396 Recommended fill of container.
52.1397 Color.
52.1398 Color designations.
52.1399 Tolerance for the designations of color of officially drawn samples.
52.1400 Grades.
52.1401 Determining the grade.
52.1402 Determining the rating for each factor.
52.1403 Requirements for grades.
52.1404 Sample size.
52.1405 Determining the grade of a lot.

Subpart—United States Standards for Grades of Frozen Concentrate for Lemonade

PRODUCT DESCRIPTION AND GRADES

52.1421 Product description.
52.1422 Grades of frozen concentrate for lemonade.

FILL OF CONTAINER

52.1423 Recommended fill of container.

FACTORS OF QUALITY

52.1424 Ascertaining the grade.
52.1425 Ascertaining the rating for the factors which are scored.
52.1426 Color.
52.1427 Absence of defects.
52.1428 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.1429 Definition of terms.
52.1430 Explanation of analyses.

LOT INSPECTION AND CERTIFICATION

52.1431 Ascertaining the grade of a lot.

SCORE SHEET

52.1432 Score sheet for frozen concentrate for lemonade.

Subpart—United States Standards for Grades of Orange Marmalade

PRODUCT DESCRIPTION, KINDS, STYLES, TYPES, AND GRADES

52.1451 Product description.
52.1452 Kinds of orange marmalade.
52.1453 Styles of orange marmalade.
52.1454 Types of orange marmalade.
52.1455 Grades of orange marmalade.

FILL OF CONTAINER

52.1456 Recommended fill of container.

FACTORS OF QUALITY

52.1457 Ascertaining the grade.
52.1458 Ascertaining the rating for the factors which are scored.
52.1459 Color.
52.1460 Consistency and character.
52.1461 Absence of defects.
52.1462 Flavor and odor.

EXPLANATIONS AND METHODS OF ANALYSES

52.1463 Explanation of terms or analyses.

LOT INSPECTION AND CERTIFICATION

52.1464 Ascertaining the grade of a lot.

SCORE SHEET

52.1465 Score sheet for orange marmalade.

Subpart—United States Standards for Grades of Canned Mushrooms

PRODUCT DESCRIPTION, COLOR TYPES, STYLES, AND GRADES

52.1481 Product description.
52.1482 Color types of canned mushrooms.
52.1483 Styles of canned mushrooms.
52.1484 Grades of canned mushrooms.

SIZES, FILL OF CONTAINER, AND DRAINED WEIGHTS

52.1485 Sizes of canned mushrooms in the styles of whole and buttons.
52.1486 Fill of container for canned mushrooms.
52.1487 Minimum drained weights for canned mushrooms.

FACTORS OF QUALITY

52.1488 Ascertaining the grade.
52.1489 Ascertaining the rating for the factors which are scored.
52.1490 Color.
52.1491 Uniformity of size and shape.
52.1492 Defects.
52.1493 Character.

LOT INSPECTION AND CERTIFICATION

52.1494 Ascertaining the grade of a lot.

SCORE SHEET

52.1495 Score sheet for canned mushrooms.

Subpart—United States Standards for Grades of Frozen Okra

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.1511 Product description.
52.1512 Styles of frozen okra.
52.1513 Grades of frozen okra.

FACTORS OF QUALITY

52.1514 Ascertaining the grade of a sample unit.
52.1515 Ascertaining the rating of the factors which are scored.
52.1516 Color.
52.1517 Defects.
52.1518 Character.

LOT COMPLIANCE

52.1519 Ascertaining the grade of a lot.

SCORE SHEET

52.1520 Score sheet for frozen okra.

Subpart—United States Standards for Grades of Olive Oil

PRODUCT DESCRIPTION AND GRADES

52.1531 Product description.
52.1532 Grades of olive oil.

FILL OF CONTAINER

52.1533 Recommended fill of container.

FACTORS OF QUALITY

52.1534 Ascertaining the grade.
52.1535 Ascertaining the rating for each factor.
52.1536 Free fatty acid content.
52.1537 Absence of defects.
52.1538 Odor.
52.1539 Flavor.

LOT INSPECTION AND CERTIFICATION

52.1540 Ascertaining the grade of a lot.

SCORE SHEET

52.1541 Score sheet for olive oil.

Subpart—United States Standards for Grades of Orange Juice

52.1551 Product description.
52.1552 Styles.
52.1553 Definitions of terms.
52.1554 Recommended sample unit size.
52.1555 Grades.
52.1556 Factors of quality and analysis.
52.1557 Requirements for grades.
52.1558 Sample size.
52.1559 Lot requirements.

Subpart—United States Standards for Grades of Canned Pears

PRODUCT DESCRIPTION, STYLES, GRADES

52.1611 Product description.
52.1612 Styles.
52.1613 Grades.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.1614 Liquid media and Brix measurements.
52.1615 Fill of container.
52.1616 Recommended drained weights.
52.1617 Recommended fill weights.

FACTORS OF QUALITY

52.1618 Ascertaining the grade.
52.1619 Ascertaining the rating for the factors which are scored.
52.1620 Color.
52.1621 Uniformity of size and symmetry.
52.1622 Absence of defects.
52.1623 Character.

LOT COMPLIANCE

52.1624 Ascertaining the grade of a lot.

SCORE SHEET

52.1625 Score sheet.

Subpart—United States Standards for Grades of Canned Field Peas and Canned Black-eye Peas

IDENTITY AND GRADES

52.1641 Identity.
52.1642 Grades of canned peas.

FILL OF CONTAINER AND DRAINED WEIGHTS

52.1643 Recommended fill of container.
52.1644 Recommended drained weight.

FACTORS OF QUALITY

52.1645 Ascertaining the grade.
52.1646 Ascertaining the rating of each factor.
52.1647 Color.
52.1648 Absence of defects.
52.1649 Character.

LOT INSPECTION AND CERTIFICATION

52.1650 Ascertaining the grade of a lot.

SCORE SHEET

52.1651 Score sheet for canned field peas and canned black-eye peas.

Subpart—United States Standards for Grades of Frozen Field Peas and Frozen Black-eye Peas

52.1661 Product description.
52.1662 Styles.
52.1663 Types.
52.1664 Definitions of terms.
52.1665 Sample unit size.
52.1666 Grades.
52.1667 Factors of quality.
52.1668 Classification of defects and grade compliance.

52.1669 Classification of color and grade compliance.
52.1670 Determining flavor, odor, presence of grit, maturity, tenderness, and texture.
52.1671 Lot acceptance for style.
52.1672 Sample size.
52.1673 Lot acceptance for quality.
52.1674 Defect tally.

Subpart—United States Standards for Grades of Pickles

PRODUCT DESCRIPTION AND STYLES

52.1681 Product description.
52.1682 Styles of pickles.

TYPES OF PACK

52.1683 Cured type.
52.1684 Fresh-pack type.

GRADES

52.1685 Grades of pickles.

FILL OF CONTAINER

52.1686 Recommended fill of container.
52.1687 Quantity of pickle ingredient.
52.1688 Compliance with recommended minimum quantity of pickle ingredient.

SIZES AND COUNTS

52.1689 Sizes for whole pickles.

FACTORS OF QUALITY

52.1690 Ascertaining the grade of a sample unit.
52.1691 Ascertaining the rating for each factor.
52.1692 Color.
52.1693 Uniformity of size.
52.1694 Defects.
52.1695 Texture.

METHODS OF ANALYSIS AND DEFINITIONS

52.1696 Definitions of analytical terms.
52.1697 Definition of equalization.
52.1698 Definitions and measurement of pickles.
52.1699 Methods of determining quantity of pickle ingredient.

LOT COMPLIANCE

52.1700 Ascertaining the grade of a lot.

EXPLANATION OF WEIGHTS AND MEASURES

52.1701 Units of weights and measures.

SCORE SHEET

52.1702 Score sheet for pickles.

Subpart—United States Standards for Grade of Canned Pineapple

52.1711 Product description.
52.1712 Styles.
52.1713 Definition of terms.
52.1714 Recommended sample unit sizes.
52.1715 Brix measurements.
52.1716 Fill of container for crushed style canned pineapple.
52.1717 Minimum drained weights for crushed style canned pineapple.
52.1718 Recommended minimum drained weights for canned pineapple (other than crushed style canned pineapple).
52.1719 Grades.
52.1720 Factors of quality and analysis.
52.1721 Requirements for grades.
52.1722 Sample size.
52.1723 Lot quality and analytical requirements.

Subpart—United States Standards for Grades of Frozen Pineapple

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.1741 Product description.
52.1742 Styles of frozen pineapple.
52.1743 Grades of frozen pineapple.

FACTORS OF QUALITY

52.1744 Ascertaining the grade.
52.1745 Ascertaining the rating of each factor.
52.1746 Color.
52.1747 Uniformity of size and symmetry.
52.1748 Absence of defects.
52.1749 Character.

LOT INSPECTION AND CERTIFICATION

52.1750 Ascertaining the grade of a lot.

SCORE SHEET

52.1751 Score sheet for frozen pineapple.

Subpart—United States Standards for Grades of Canned Pineapple Juice

52.1761 Product description.
52.1762 Styles.
52.1763 Definitions of terms.
52.1764 Recommended sample unit sizes.
52.1765 Grades.
52.1766 Factors of quality and analysis.
52.1767 Fill of container.
52.1768 Requirements for grades.
52.1769 Sample size.
52.1770 Lot requirements.

Subpart—United States Standards for Grades of Canned Plums

PRODUCT DESCRIPTION, VARIETIES, STYLES, AND GRADES

52.1781 Product description.
52.1782 Varietal types.
52.1783 Styles.
52.1784 Grades.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.1785 Liquid media and Brix measurements for canned plums.
52.1786 Recommended fill of container.
52.1787 Minimum drained weight requirements.
52.1788 Recommended fill weights.

SAMPLE UNIT SIZE

52.1789 Sample unit size.

FACTORS OF QUALITY

52.1790 Ascertaining the grade of a sample unit.
52.1791 Ascertaining the rating for the factors which are scored.
52.1792 Color.
52.1793 Uniformity of size.
52.1794 Defects.
52.1795 Character.

ALLOWANCES FOR QUALITY FACTORS

52.1796 Allowances for quality factors.

LOT COMPLIANCE

52.1797 Ascertaining the grade of a lot.

SCORE SHEET

52.1798 Score sheet for canned plums.

Subpart—United States Standards for Grades of Canned White Potatoes

52.1811 Product description.
52.1812 Styles.
52.1813 Definitions of terms.
52.1814 Recommended fill of containers.
52.1815 Recommended minimum drained weights.
52.1816 Recommended sample unit sizes.
52.1817 Size requirements for whole potatoes.
52.1818 Grades.
52.1819 Factors of quality.
52.1820 Requirements for grades.
52.1821 Determining the grade of a lot.

Subpart—United States Standards for Grades of Processed Raisins

52.1841 Product description.
52.1842 Product description of Layer (or Cluster) raisins with seeds.
52.1843 Summary of types (varieties) of processed raisins.
52.1844 Definition of terms.

TYPE I—SEEDLESS RAISINS

52.1845 Sizes of seedless raisins.
52.1846 Grades of seedless raisins.

TYPE II—GOLDEN SEEDLESS RAISINS

52.1847 Colors of golden seedless raisins.
52.1848 Sizes of golden seedless raisins.
52.1849 Grades of golden seedless raisins.

TYPE III—RAISINS WITH SEEDS

52.1850 Sizes of raisins with seeds—except layer or cluster.
52.1851 Sizes of raisins with seeds—layer or cluster.
52.1852 Grades of raisins with seeds—except layer or cluster.
52.1853 Grades of raisins with seeds—layer or cluster.

TYPE IV—SULTANA RAISINS

52.1854 Sizes of Sultana raisins.
52.1855 Grades of Sultana raisins.

TYPE V—ZANTE CURRANT RAISINS

52.1856 Sizes of zante currant raisins.
52.1857 Grades of zante currant raisins.

TYPE VI—MIXED TYPE OF RAISINS

52.1858 Grades of mixed types or varieties of raisins.

Subpart—United States Standards for Grades of Frozen Raspberries

PRODUCT DESCRIPTION, TYPES, AND GRADES

52.1871 Product description.
52.1872 Types (colors) of frozen raspberries
52.1873 Grades of frozen raspberries (not for manufacturing).
52.1874 Grades of frozen raspberries for manufacturing.

FACTORS OF QUALITY

52.1875 Ascertaining the score and grade for frozen raspberries (not for manufacturing).
52.1876 Ascertaining the score of each factor for frozen raspberries (not for manufacturing).
52.1877 Color.
52.1878 Absence of defects.
52.1879 Character.
52.1880 Determination of the grades of frozen raspberries for manufacturing.
52.1881 Ascertaining the rating of each factor for frozen raspberries for manufacturing.
52.1882 Color.
52.1883 Absence of defects.
52.1884 Character.

LOT INSPECTION AND CERTIFICATION

52.1885 Ascertaining the grade of a lot.

SCORE SHEET

52.1886 Score sheet for frozen raspberries (not for manufacturing).

Subpart—United States Standards for Grades of Canned Spinach

PRODUCT DESCRIPTION, STYLES, GRADES

52.1901 Product description.
52.1902 Styles of canned spinach.
52.1903 Grades of canned spinach.

DEFINITIONS OF TERMS AND SYMBOLS

52.1904 Definitions of terms and symbols.

FILL OF CONTAINER

52.1905 Recommended fill of container.

RECOMMENDED DRAINED WEIGHTS

52.1906 Recommended drained weights.

FACTORS OF QUALITY

52.1907 Factors of quality.
52.1908 Sample unit size.

PRODUCT CHARACTERISTICS

52.1909 Classification of defects.

TOLERANCES FOR GRADE COMPLIANCE

52.1910 Tolerances for stem material.
52.1911 Tolerances for color, character, damage, harmless extraneous material.

ASCERTAINING PERCENTAGE OF STEM MATERIAL

52.1912 Method for ascertaining percentage of stem material.

LOT ACCEPTANCE

52.1913 Lot acceptance for drained weights.
52.1914 Lot acceptance for quality.

TALLY SHEET

52.1915 Tally sheet for canned spinach.

Subpart—United States Standards for Grades of Frozen Spinach [Reserved]

Subpart—United States Standards for Grades of Frozen Cooked Squash

PRODUCT DESCRIPTION AND GRADES

52.1941 Product description.
52.1942 Grades of frozen cooked squash.

FACTORS OF QUALITY

52.1943 Ascertaining the grade.
52.1944 Ascertaining the ratings for the factors which are scored.
52.1945 Consistency.
52.1946 Color.
52.1947 Finish.
52.1948 Absence of defects.

LOT INSPECTION AND CERTIFICATION

52.1949 Ascertaining the grade of a lot.

SCORE SHEET

52.1950 Score sheet for frozen cooked squash.

Subpart—United States Standards for Grades of Frozen Squash (Summer Type)

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.1961 Product description.
52.1962 Styles of frozen squash.
52.1963 Grades of frozen summer squash.

FACTORS OF QUALITY

52.1964 Ascertaining the grade.
52.1965 Ascertaining the ratings for the factors which are scored.
52.1966 Color.
52.1967 Absence of defects.
52.1968 Character.

LOT INSPECTION AND CERTIFICATION

52.1969 Ascertaining the grade of a lot.

SCORE SHEET

52.1970 Score sheet for frozen squash (summer type).

Subpart—United States Standards for Grades of Frozen Strawberries

PRODUCT DESCRIPTION, STYLES, SIZES, AND GRADES

52.1981 Product description.
52.1982 Styles of frozen strawberries.
52.1983 Sizes of whole frozen strawberries.
52.1984 Grades of frozen strawberries.

FACTORS OF QUALITY

52.1985 Ascertaining the grade.
52.1986 Ascertaining the rating for the factors which are scored.
52.1987 Color.
52.1988 Defects.
52.1989 Character.

EXPLANATION AND METHOD OF ANALYSIS

52.1990 Definition of terms.
52.1991 Explanation of analysis.

LOT INSPECTION AND CERTIFICATION

52.1992 Ascertaining the grade of a lot.

SCORE SHEET

52.1993 Score sheet for frozen strawberries.

Subpart—United States Standards for Grades of Frozen Succotash

PRODUCT DESCRIPTION, INGREDIENTS, AND GRADES

52.2011 Product description.

52.2012 Kind, type, and style of ingredients.
52.2013 Proportion of ingredients.
52.2014 Grades of frozen succotash.

FACTORS OF QUALITY

52.2015 Ascertaining the grade.
52.2016 Ascertaining the rating for the factors which are scored.
52.2017 Color.
52.2018 Absence of defects.
52.2019 Tenderness.
52.2020 Method for determining proportion of ingredients.

LOT INSPECTION AND CERTIFICATION

52.2021 Ascertaining the grade of a lot.

SCORE SHEET

52.2022 Score sheet for frozen succotash.

Subpart—United States Standards for Grades of Canned Sweetpotatoes

52.2041 Product description.
52.2042 Varietal color types.
52.2043 Styles.
52.2044 Types of pack.
52.2045 Definitions of terms.
52.2046 Recommended designations of liquid media and Brix measurements.
52.2047 Recommended fill of container.
52.2048 Recommended minimum drained weight.
52.2049 Recommended fill weights.
52.2050 Recommended sample unit size.
52.2051 Grades.
52.2052 Factors of quality.
52.2053 Requirements for grades.
52.2054 Determining the grade of a lot.

Subpart—United States Standards for Grades of Canned Tangerine Juice

PRODUCT DESCRIPTION AND GRADES

52.2071 Product description.
52.2072 Grades of canned tangerine juice.

FILL OF CONTAINER

52.2073 Recommended fill of container.

FACTORS OF QUALITY

52.2074 Ascertaining the grade.
52.2075 Ascertaining the rating of each factor.
52.2076 Color.
52.2077 Absence of defects.
52.2078 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.2079 Definitions of terms.
52.2080 Explanation of analyses.

LOT INSPECTION AND CERTIFICATION

52.2081 Ascertaining the grade of a lot.

SCORE SHEET

52.2082 Score sheet for canned tangerine juice.

Subpart—United States Standards for Grades of Tomato Catsup

IDENTITY AND GRADES

52.2101 Identity.
52.2102 Grades of tomato catsup.

FILL OF CONTAINER

52.2103 Recommended fill of container for tomato catsup.

FACTORS OF QUALITY

52.2104 Ascertaining the grade.
52.2105 Ascertaining the rating for the factors which are scored.
52.2106 Color.
52.2107 Consistency.
52.2108 Absence of defects.
52.2109 Flavor.

DEFINITIONS

52.2110 Definitions of terms used in these standards.

LOT INSPECTION AND CERTIFICATION

52.2111 Ascertaining the grade of a lot.

SCORE SHEET

52.2112 Score sheet for tomato catsup.

Subpart—United States Standards for Grades of Frozen Mixed Vegetables

PRODUCT DESCRIPTION, KINDS, STYLES, PROPORTIONS, AND GRADES

52.2131 Product description.
52.2132 Kinds and styles of basic vegetables.
52.2133 Recommended proportions of ingredients.
52.2134 Grades of frozen mixed vegetables.

FACTORS OF QUALITY

52.2135 Ascertaining the grade.
52.2136 Ascertaining the rating for the factors which are scored.
52.2137 Color.
52.2138 Absence of defects.
52.2139 Character.

EXPLANATIONS AND METHODS OF ANALYSES

52.2140 Explanation of terms and analyses.

LOT INSPECTION AND CERTIFICATION

52.2141 Ascertaining the grade of a lot.

SCORE SHEET

52.2142 Score sheet for frozen mixed vegetables.

Subpart—United States Standards for Grades of Canned Apples

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2161 Product description.
52.2162 Styles of canned apples.
52.2163 Grades of canned apples.

FILL OF CONTAINER AND DRAINED WEIGHTS

52.2164 Recommended fill of container.
52.2165 Recommended minimum drained weights.

FACTORS OF QUALITY

52.2166 Ascertaining the grade.
52.2167 Ascertaining the rating for the factors which are scored.
52.2168 Color.
52.2169 Uniformity of size.
52.2170 Absence of defects.
52.2171 Character.

LOT INSPECTION AND CERTIFICATION

52.2172 Ascertaining the grade of a lot.

SCORE SHEET

52.2173 Score sheet for canned apples.

Subpart—United States Standards for Grades of Chili Sauce

PRODUCT DESCRIPTION AND GRADES

52.2191 Product description.
52.2192 Grades of chili sauce.

FILL OF CONTAINER

52.2193 Recommended fill of container for chili sauce.

FACTORS OF QUALITY

52.2194 Ascertaining the grade.
52.2195 Ascertaining the rating for the factors which are scored.
52.2196 Color.
52.2197 Consistency.
52.2198 Character.
52.2199 Absence of defects.
52.2200 Flavor.

LOT INSPECTION AND CERTIFICATION

52.2201 Ascertaining the grade of a lot.

SCORE SHEET

52.2202 Score sheet for chili sauce.

Subpart—United States Standards for Grades of Canned Peas

IDENTITY, TYPES, AND GRADES

52.2281 Identity.
52.2282 Types of canned peas.
52.2283 Grades of canned peas.

FILL OF CONTAINER

52.2284 The standard of fill of container.
52.2285 Sizes of peas.

FACTORS OF QUALITY

52.2286 Ascertaining the grade.
52.2287 Ascertaining the rating for the factors which are scored.
52.2288 Liquor.
52.2289 Color.
52.2290 Defects.
52.2291 Maturity and tenderness.

METHODS OF ANALYSES

52.2292 Methods of analyses.

LOT INSPECTION AND CERTIFICATION

52.2293 Ascertaining the grade of a lot.

SCORE SHEET

52.2294 Score sheet for canned peas.

Subpart—United States Standards for Grades of Frozen Green Beans and Frozen Wax Beans

52.2321 Product description.
52.2322 Styles.
52.2323 Style classification and tolerances.
52.2324 Types.
52.2325 Kinds of pack.
52.2326 Definitions of terms.
52.2327 Recommended sample unit sizes.
52.2328 Grades.
52.2329 Factors of quality.
52.2330 Classification of defects.
52.2331 Tolerances for defects.
52.2332 Sample size.
52.2333 Style requirement criteria.
52.2334 Quality requirement criteria.

Subpart—United States Standards for Grades of Dehydrated (Low-Moisture) Apples

52.2341 Product description.
52.2342 Styles.
52.2343 Grades.
52.2344 Determining the grade.
52.2345 Determining the rating for the factors which are scored.
52.2346 Color.
52.2347 Uniformity of size.
52.2348 Defects.
52.2349 Texture.
52.2350 Explanations of methods and analyses.
52.2351 Determining the grade of a lot.

52.2352 Score sheet.

Subpart—United States Standards for Grades of Tomato Sauce

PRODUCT DESCRIPTION AND GRADES

52.2371 Product description.
52.2372 Grades of tomato sauce.

FILL OF CONTAINER

52.2373 Recommended fill of container for tomato sauce.

FACTORS OF QUALITY

52.2374 Ascertaining the grade.
52.2375 Ascertaining the rating for the factors which are scored.
52.2376 Color.
52.2377 Consistency.
52.2378 Defects.
52.2379 Flavor.

LOT INSPECTION AND CERTIFICATION

52.2380 Ascertaining the grade of a lot.

SCORE SHEET

52.2381 Score sheet for tomato sauce.

Subpart—United States Standards for Grades of Frozen French Fried Potatoes

PRODUCT DESCRIPTION, STYLES, LENGTHS, AND GRADES

52.2391 Product description.
52.2392 Fry color type.
52.2392a Types.
52.2393 Styles.
52.2394 Length designations.
52.2395 Grades.

FACTORS OF QUALITY

52.2396 Ascertaining the grade of a sample unit.
52.2397 Ascertaining the rating for the factors which are scored.
52.2398 Color.
52.2399 Uniformity of size and symmetry.
52.2400 Defects.
52.2401 Texture.

LOT COMPLIANCE

52.2402 Ascertaining the grade of a lot.
52.2403 Ascertaining the length designation of a lot.

EXPLANATION OF TERMS

52.2404 Equivalents.

SCORE SHEET

52.2405 Score sheet for frozen french fried potatoes.

Subpart—United States Standards for Grades of Peeled Potatoes

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2421 Product description.
52.2422 Styles of peeled potatoes.
52.2423 Grades of peeled potatoes.

SIZES

52.2424 Size of peeled whole and peeled whole and cut potatoes.
52.2425 Size of potato slices in sliced potatoes.

FACTORS OF QUALITY

52.2426 Ascertaining the grade.
52.2427 Ascertaining the rating of the factors which are scored.
52.2428 Color.
52.2429 Uniformity of size.
52.2430 Defects.
52.2431 Texture.

LOT INSPECTION AND CERTIFICATION

52.2432 Ascertaining the grade of a lot.

SCORE SHEET

52.2433 Score sheet for peeled potatoes.

Subpart—United States Standards for Grades of Frozen Concentrated Sweetened Grape Juice

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.2451 Product description.
52.2452 Types of frozen concentrated sweetened grape juice.
52.2453 Styles of frozen concentrated sweetened grape juice.
52.2454 Grades of frozen concentrated sweetened grape juice.

FILL OF CONTAINER

52.2455 Recommended fill of container.

FACTORS OF QUALITY

52.2456 Ascertaining the grade.
52.2457 Ascertaining the rating for the factors which are scored.
52.2458 Color.
52.2459 Defects.
52.2460 Flavor.

EXPLANATIONS AND METHODS OF ANALYSIS

52.2461 Definition of terms used in these standards.
52.2462 Methods of analysis.

LOT INSPECTION AND CERTIFICATION

52.2463 Ascertaining the grade of a lot.

SCORE SHEET

52.2464 Score sheet for frozen concentrated sweetened grape juice.

Subpart—United States Standards for Grades of Dried Apples

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2481 Product description.
52.2482 Styles of dried apples.
52.2483 Grades of dried apples.

DEFINITIONS OF TERMS

52.2484 Definitions of colors.
52.2485 Definitions of uniformity of size.
52.2486 Definitions of defects and degrees of freedom from defects.
52.2487 Definitions of texture.
52.2488 Definition of flavor and odor.

EXPLANATIONS AND METHODS OF ANALYSES

52.2489 Moisture.

WORK SHEET

52.2490 Work sheet for dried apples.

Subpart—United States Standards for Grades of Frozen Peas and Carrots

PRODUCT DESCRIPTION, KINDS, TYPES, STYLES, PROPORTIONS OF INGREDIENTS, AND GRADES

52.2501 Product description.
52.2502 Kinds, types, styles, and proportions of vegetables.
52.2503 Grades of frozen peas and carrots.

FACTORS OF QUALITY

52.2504 Ascertaining the grade.
52.2505 Ascertaining the rating for the factors which are scored.
52.2506 Color.
52.2507 Defects.
52.2508 Character.

LOT INSPECTION AND CERTIFICATION

52.2509 Ascertaining the grade of a lot.

SCORE SHEET

52.2510 Score sheet for frozen peas and carrots.

Subpart—United States Standards for Grades of Frozen Concentrate for Limeade

PRODUCT DESCRIPTION AND GRADES

52.2521 Product description.
52.2522 Grades of frozen concentrate for limeade.

FILL OF CONTAINER

52.2523 Recommended fill of container.

FACTORS OF QUALITY

52.2524 Ascertaining the grade.
52.2525 Ascertaining the rating for the factors which are scored.
52.2526 Color.
52.2527 Defects.
52.2528 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.2529 Definition of terms.
52.2530 Explanation of analyses.

Subpart—United States Standards for Grades of Canned Asparagus

PRODUCT DESCRIPTION, STYLES, GRADES, AND TYPES

52.2541 Identity.
52.2542 Styles.
52.2543 Grades.
52.2544 Types.

FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.2545 Recommended fill of container.
52.2546 Recommended minimum drained weights.
52.2547 Recommended minimum fill weights.

SIZE (DIAMETER) OF SPEARS, TIPS, AND POINTS

52.2548 Size (diameter) of spears, tips, and points.
52.2549 Compliance with single size recommendations.

FACTORS OF QUALITY

52.2550 Ascertaining the grade.
52.2551 Ascertaining the rating for the factors which are scored.
52.2552 Liquor.
52.2553 Color.
52.2554 Defects.
52.2555 Character.

DEFINITIONS AND EXPLANATIONS

52.2556 Definitions and explanations of terms.

LOT INSPECTION AND CERTIFICATION

52.2557 Ascertaining the grade of a lot.

SCORE SHEET

52.2558 Score sheet.

Subpart—United States Standards for Grades of Canned Clingstone Peaches

52.2561 Product description.
52.2562 Styles.
52.2563 Grades.
52.2564 Grades of canned "solid-pack" clingstone peaches.

52.2565 Liquid media and Brix measurements.
52.2566 Fill of container.
52.2567 Recommended fill of container for canned "solid-pack" clingstone peaches.
52.2568 Recommended drained weights.
52.2569 Recommended fill weights.
52.2570 Ascertaining the grade.
52.2571 Ascertaining the rating for the factors which are scored.
52.2572 Color.
52.2573 Uniformityof size and symmetry.
52.2574 Absence of defects.
52.2575 Character.
52.2576 Ascertaining the grade of a lot.

Subpart—United States Standards for Grades of Canned Freestone Peaches

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2601 Product description.
52.2602 Styles.
52.2603 Definitions of terms.
52.2604 Recommended sample unit sizes.
52.2605 Liquid media and Brix measurements.
52.2606 Fill of container.
52.2607 Fill of container for canned "solid-pack" freestone peaches.
52.2608 Recommended drained weights.
52.2609 Recommended fill weights.
52.2610 Grades.
52.2611 Factors of quality.
52.2612 Classification of defects.
52.2613 Tolerances for defects.
52.2614 Sample size.
52.2615 Compliance with quality requirements.

LOT INSPECTION AND CERTIFICATION

52.2616 Ascertaining the grade of a lot.

SCORE SHEET

52.2617 Score sheet.

Subpart—United States Standards for Grades of Canned and Canned Solid-Pack Apricots

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2641 Product description.
52.2642 Styles.
52.2643 Grades.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.2644 Liquid media and Brix measurements.
52.2645 Fill of container.
52.2646 Recommended minimum drained weights.
52.2647 Recommended minimum fill weights.

SAMPLE UNIT SIZE

52.2648 Sample unit size.

FACTORS OF QUALITY

52.2649 Ascertaining the grade.
52.2650 Ascertaining the rating for the factors which are scored.
52.2651 Color.
52.2652 Uniformity of size and symmetry.
52.2653 Defects.
52.2654 Character.

ALLOWANCES FOR QUALITY FACTORS

52.2655 Allowances for quality factors for canned apricots.

LOT INSPECTION AND CERTIFICATION

52.2656 Ascertaining the grade of a lot.

SCORE SHEET

52.2657 Score sheet for canned apricots.

Subpart—United States Standards for Grades of Canned Pimientos

IDENTITY AND TYPES OF PACK

52.2681 Identity.
52.2682 Types of pack.
52.2683 Styles of canned pimientos.
52.2684 Grades of canned pimientos.

FILL OF CONTAINER AND DRAINED WEIGHTS

52.2685 Recommended fill of container.
52.2686 Recommended drained weight.
52.2687 Compliance with recommended drained weights.

FACTORS OF QUALITY

52.2688 Ascertaining the grade of a sample unit.
52.2689 Ascertaining the rating for the factors which are scored.
52.2690 Color.
52.2691 Uniformity of size and shape.
52.2692 Defects.
52.2693 Character.

LOT COMPLIANCE

52.2694 Ascertaining the grade of a lot.

SCORE SHEET

52.2695 Score sheet for canned pimientos.

Subpart—United States Standards for Grades of Canned Pumpkin and Canned Squash

PRODUCT DESCRIPTION AND GRADES

52.2741 Product description.
52.2742 Grades of canned pumpkin and canned squash.

FILL OF CONTAINER

52.2743 Recommended fill of container.

FACTORS OF QUALITY

52.2744 Ascertaining the grade.
52.2745 Ascertaining the rating for the factors which are scored.
52.2746 Color.
52.2747 Consistency.
52.2748 Finish.
52.2749 Defects.

LOT INSPECTION AND CERTIFICATION

52.2750 Ascertaining the grade of a lot.

SCORE SHEET

52.2751 Score sheet for canned pumpkin and canned squash.

Subpart—United States Standards for Grades of Apple Butter

IDENTITY AND GRADES

52.2801 Identity.
52.2802 Grades of apple butter.

FILL OF CONTAINER

52.2803 Recommended fill of container.

FACTORS OF QUALITY

52.2804 Ascertaining the grade of a sample unit.
52.2805 Ascertaining the rating for the factors which are scored.
52.2806 Color.
52.2807 Consistency.
52.2808 Finish.
52.2809 Defects.
52.2810 Flavor.

LOT INSPECTION AND CERTIFICATION

52.2811 Ascertaining the grade of a lot.

SCORE SHEET

52.2812 Score sheet for apple butter.

Subpart—United States Standards for Grades of Canned Kadota Figs

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2821 Product description.
52.2822 Styles.
52.2823 Grades.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.2824 Liquid media and Brix measurements.
52.2825 Recommended fill of container.
52.2826 Recommended minimum drained weights.
52.2827 Recommended minimum fill weights.

FACTORS OF QUALITY

52.2828 Ascertaining the grade.
52.2829 Ascertaining the rating for the factors which are scored.
52.2830 Color.
52.2831 Uniformity of size.
52.2832 Absence of defects.
52.2833 Character.

LOT INSPECTION AND CERTIFICATION

52.2834 Ascertaining the grade of a lot.

SCORE SHEET

52.2835 Score sheet.

Subpart—United States Standards for Grades of Comb Honey

PRODUCT DESCRIPTION

52.2861 Product description.

GRADES OF COMB-SECTION HONEY

52.2862 U.S. Fancy comb-section honey.
52.2863 U.S. No. 1 comb-section honey.
52.2864 U.S. No. 1 Mixed Color comb-section honey.
52.2865 U.S. No. 2 comb-section honey.
52.2866 Unclassified comb-section honey.

GRADES FOR SHALLOW-FRAME COMB HONEY

52.2867 U.S. Fancy shallow-frame comb honey.
52.2868 U.S. No. 1 shallow-frame comb honey.
52.2869 Unclassified shallow-frame comb honey.

GRADES FOR WRAPPED CUT-COMB HONEY

52.2870 U.S. Fancy wrapped cut-comb honey.
52.2871 U.S. No. 1 wrapped cut-comb honey.
52.2872 Unclassified wrapped cut-comb honey.

GRADES FOR CHUNK OR BULK COMB HONEY

52.2873 U.S. Fancy chunk or bulk comb honey—packed in tin.
52.2874 U.S. No. 1 chunk or bulk comb honey—packed in tin.
52.2875 Unclassified chunk or bulk comb honey—packed in tin.
52.2876 U.S. Fancy chunk or bulk comb honey—packed in glass.
52.2877 U.S. No. 1 chunk or bulk comb honey—packed in glass.
52.2878 Unclassified chunk or bulk comb honey—packed in glass.

TOLERANCES FOR GRADES

52.2879 Application of tolerances.
52.2880 Tolerances for comb-section honey.
52.2881 Tolerances for shallow-frame comb honey.
52.2882 Tolerances for wrapped cut-comb honey.

52.2883 Tolerances for chunk or bulk comb honey—packed in tin.
52.2884 Tolerances for chunk or bulk comb honey—packed in glass.

COLORS, COLOR CLASSIFICATIONS

52.2885 Official USDA colors.
52.2886 Color classifications of comb honey.
52.2887 Uniformity of color.

DEFINITIONS OF TERMS

52.2888 Definitions of terms.

Subpart—United States Standards for Grades of Frozen Plums

PRODUCT DESCRIPTION, COLOR TYPES, STYLES, AND GRADES

52.2911 Product description.
52.2912 Color types of frozen plums.
52.2913 Styles of frozen plums.
52.2914 Grades of frozen plums.

FACTORS OF QUALITY

52.2915 Ascertaining the grade.
52.2916 Ascertaining the rating for the factors which are scored.
52.2917 Color.
52.2918 Size.
52.2919 Defects.
52.2920 Character.

LOT INSPECTION AND CERTIFICATION

52.2921 Ascertaining the grade of a lot.

SCORE SHEET

52.2922 Score sheet for frozen plums.

Subpart—United States Standards for Grades of Concentrated Tangerine Juice for Manufacturing

PRODUCT DESCRIPTION AND GRADES

52.2931 Product description.
52.2932 Grades of concentrated tangerine juice for manufacturing.

FILL OF CONTAINER

52.2933 Recommended fill of container.

FACTORS OF QUALITY

52.2934 Ascertaining the grade.
52.2935 Ascertaining the rating for the factors which are scored.
52.2936 Color.
52.2937 Defects.
52.2938 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.2939 Explanation of terms and analyses.

LOT INSPECTION AND CERTIFICATION

52.2940 Ascertaining the grade of a lot.

SCORE SHEET

52.2941 Score sheet for concentrated tangerine juice for manufacturing.

Subpart—United States Standards for Grades of Canned Sauerkraut

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.2951 Product description.
52.2952 Styles of canned kraut.
52.2953 Grades of canned kraut.

FILL OF CONTAINER AND DRAINED WEIGHTS

52.2954 Recommended fill of container.
52.2955 Recommended minimum drained weight.
52.2956 Compliance with recommended minimum drained weights.

FACTORS OF QUALITY

52.2957 Ascertaining the grade.
52.2958 Ascertaining the rating for the factors which are scored.
52.2959 Color.
52.2960 Cut.
52.2961 Defects.
52.2962 Character.
52.2963 Flavor.

DEFINITIONS; METHODS OF ANALYSES

52.2964 Definitions of terms and methods of analyses.

LOT INSPECTION AND CERTIFICATION

52.2965 Ascertaining the grade of a lot.

SCORE SHEET

52.2966 Score sheet for canned sauerkraut.

Subpart—United States Standards for Grades of Frozen Sweet Peppers

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.3001 Product description.
52.3002 Types of frozen sweet peppers.
52.3003 Styles of frozen sweet peppers.
52.3004 Grades of frozen sweet peppers.

FACTORS OF QUALITY

52.3005 Ascertaining the grade.
52.3006 Ascertaining the rating for the factors which are scored.
52.3007 Color.
52.3008 Uniformity of size and symmetry.
52.3009 Defects.
52.3010 Character.

LOT INSPECTION AND CERTIFICATION

52.3011 Ascertaining the grade of a lot.

SCORE SHEET

52.3012 Score sheet for frozen sweet peppers.

Subpart—United States Standards for Grades of Canned Onions

PRODUCT DESCRIPTION AND GRADES

52.3041 Product description.
52.3042 Grades of canned onions.

RECOMMENDED FILL OF CONTAINER, DRAINED WEIGHT, AND COUNT OF CANNED ONIONS

52.3043 Fill of container.
52.3044 Drained weights.
52.3045 Count of onions.

FACTORS OF QUALITY

52.3046 Ascertaining the grade.
52.3047 Ascertaining the rating for the factors which are scored.
52.3048 Color.
52.3049 Uniformity of size and shape.
52.3050 Defects.
52.3051 Character.

LOT INSPECTION AND CERTIFICATION

52.3052 Ascertaining the grade of a lot.

SCORE SHEET

52.3053 Score sheet for canned onions.

Subpart—United States Standards for Grades of Peanut Butter

PRODUCT DESCRIPTION, TEXTURES, TYPES, STYLES, GRADES

52.3061 Product description.
52.3062 Textures of peanut butter.
52.3063 Types of peanut butter.
52.3064 Styles of peanut butter.
52.3065 Grades of peanut butter.

FACTORS OF QUALITY

52.3066 Ascertaining the grade.
52.3067 Ascertaining the rating for the factors which are scored.
52.3068 Color.
52.3069 Consistency.
52.3070 Absence of defects.
52.3071 Flavor and aroma.

EXPLANATIONS AND METHODS OF ANALYSIS

52.3072 Methods of analysis for water-insoluble inorganic residue and salt.

LOT COMPLIANCE

52.3073 Ascertaining the grade of a lot.

SCORE SHEET

52.3074 Score sheet for peanut butter.

Subpart—United States Standards for Grades of Sugarcane Sirup

PRODUCT DESCRIPTION, TYPES, AND GRADES

52.3101 Product description.
52.3102 Types of sugarcane sirup.
52.3103 Grades of sugarcane sirup.

FILL OF CONTAINER

52.3104 Recommended fill of container.

FACTORS OF QUALITY

52.3105 Ascertaining the grade.
52.3106 Ascertaining the score for the factors which are rated.
52.3107 Color.
52.3108 Flavor.
52.3109 Defects.
52.3110 Clarity.

DEFINITIONS AND METHODS OF ANALYSIS

52.3111 Color of sugarcane sirup.
52.3112 Application of U.S.D.A. permanent glass color standards in classifying the color of sugarcane sirup.
52.3113 Soluble solids; Brix value.
52.3114 Ash.
52.3115 Sulfur dioxide, p.p.m.
52.3116 Reducing sugars.
52.3117 Sucrose.
52.3118 Methods of analysis.

LOT INSPECTION AND CERTIFICATION

52.3119 Ascertaining the grade of a lot.

SCORE SHEET

52.3120 Score sheet for sugarcane sirup.

Subpart—United States Standards for Grades of Frozen Sweet Cherries

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.3161 Product description.
52.3162 Types of frozen sweet cherries.
52.3163 Styles of frozen sweet cherries.
52.3164 Grades of frozen sweet cherries.

FACTORS OF QUALITY

52.3165 Ascertaining the grade.
52.3166 Ascertaining the rating for the factors which are scored.
52.3167 Color.
52.3168 Size and symmetry.
52.3169 Defects.
52.3170 Character.

LOT INSPECTION AND CERTIFICATION

52.3171 Ascertaining the grade of a lot.

SCORE SHEET

52.3172 Score sheet for frozen sweet cherries.

Subpart—United States Standards for Grades of Dried Prunes

PRODUCT DESCRIPTION, VARIETAL TYPES, SIZES, GRADES

52.3181 Product description.
52.3182 Varietal types of dried prunes.
52.3183a Styles of dried prunes.
52.3183b Count-sizes of whole unpitted dried prunes.
52.3184 Grades of dried prunes.

MOISTURE, UNIFORMITY OF SIZE, DEFECTS

52.3185 Moisture limits.
52.3186 Definitions for uniformity of size.
52.3187 Definitions and explanations of defects.

WORK SHEET

52.3188 Work sheet for dried prunes.

Subpart—United States Standards for Grades of Dehydrated, Low-Moisture Prunes

PRODUCT DESCRIPTION, MOISTURE, STYLES GRADES

52.3231 Product description.
52.3232 Moisture of low-moisture prunes.
52.3233 Styles of dehydrated prunes.
52.3234 Grades of low-moisture prunes.

FACTORS OF QUALITY

52.3235 Ascertaining the grade.
52.3236 Ascertaining the rating for the factors which are scored.
52.3237 Color.
52.3238 Uniformity of size and count.
52.3239 Absence of defects.
52.3240 Texture.

EXPLANATIONS AND METHODS OF ANALYSES

52.3241 Explanations of methods and analyses.

LOT INSPECTION AND CERTIFICATION

52.3242 Ascertaining the grade of a lot.

SCORE SHEET

52.3243 Score sheet for low-moisture prunes.

Subpart—United States Standards for Grades of Canned Hominy

PRODUCT DESCRIPTION, COLOR, STYLES, AND GRADES

52.3281 Product description.
52.3282 Color of canned hominy.
52.3283 Styles of canned hominy.
52.3284 Grades of canned hominy.

FILL OF CONTAINER AND DRAINED WEIGHTS

52.3285 Recommended fill of container.
52.3286 Recommended minimum drained weight.
52.3287 Compliance with recommended minimum drained weights.

FACTORS OF QUALITY

52.3288 Ascertaining the grade.
52.3289 Ascertaining the rating for the factors which are scored.
52.3290 Liquor.
52.3291 Color.
52.3292 Defects.
52.3293 Character.

LOT INSPECTION AND CERTIFICATION

52.3294 Ascertaining the grade of a lot.

SCORE SHEET

52.3295 Score sheet for canned hominy.

Subpart—United States Standards for Grades of Canned Raspberries

PRODUCT DESCRIPTION, COLOR TYPES, AND GRADES

52.3311 Product description.
52.3312 Color types.
52.3313 Grades.

LIQUID MEDIA, FILL OF CONTAINER, AND DRAINED WEIGHTS

52.3314 Liquid media and Brix measurements.
52.3315 Recommended fill of container.
52.3316 Recommended minimum drained weights.

FACTORS OF QUALITY

52.3317 Ascertaining the grade.
52.3318 Ascertaining the rating for the factors which are scored.
52.3319 Color.
52.3320 Uniformity of size.
52.3321 Defects.
52.3322 Character.

LOT INSPECTION AND CERTIFICATION

52.3323 Ascertaining the grade of a lot.

SCORE SHEET

52.3324 Score sheet for canned raspberries.

Subpart—United States Standards for Grades of Canned Okra

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.3331 Product description.
52.3332 Types of canned okra.
52.3333 Styles of canned okra.
52.3334 Grades of canned okra.

FILL OF CONTAINER AND DRAINED WEIGHTS

52.3335 Recommended fill of container.
52.3336 Drained weights.

FACTORS OF QUALITY

52.3337 Ascertaining the grade.
52.3338 Ascertaining the rating for the factors which are scored.
52.3339 Color.
52.3340 Size.
52.3341 Defects.
52.3342 Character.

METHODS OF ANALYSIS

52.3343 Percent, by weight, of fibrous material.

ASCERTAINING THE GRADE OF A LOT

52.3344 Ascertaining the grade of a lot.

SCORE SHEET

52.3345 Score sheet.

Subpart—United States Standards for Grades of Canned Tomatoes and Okra and Canned Okra and Tomatoes

PRODUCT DESCRIPTION, PROPORTION OF INGREDIENTS, AND GRADES

52.3421 Product description.
52.3422 Proportion of ingredients.
52.3423 Grades.

FILL OF CONTAINER

52.3424 Fill of container.

FACTORS OF QUALITY

52.3425 Ascertaining the grade.
52.3426 Ascertaining the rating for the factors which are scored.
52.3427 Color.
52.3428 Flavor.
52.3429 Defects.
52.3430 Character.

LOT INSPECTION AND CERTIFICATION

52.3431 Ascertaining the grade of a lot.

SCORE SHEET

52.3432 Score sheet for canned tomatoes and okra and canned okra and tomatoes.

Subpart—United States Standards for Grades of Bulk Sauerkraut

PRODUCT DESCRIPTION, GRADES

52.3451 Product description.
52.3452 Grades of bulk sauerkraut.

FACTORS OF QUALITY

52.3453 Ascertaining the grade.
52.3454 Ascertaining the rating of each factor.
52.3455 Color.
52.3456 Cut.
52.3457 Absence of defects.
52.3458 Texture.
52.3459 Flavor.

METHODS OF ANALYSIS

52.3460 Determination of acidity.

LOT COMPLIANCE

52.3461 Ascertaining the grade of a lot.

SCORE SHEET

52.3462 Score sheet for bulk sauerkraut.

Subpart—United States Standards for Grades of Frozen Peas

PRODUCT DESCRIPTION AND GRADES

52.3511 Product description.
52.3512 Grades of frozen peas.

FACTORS OF QUALITY

52.3513 Ascertaining the grade.
52.3514 Ascertaining the rating for the factors which are scored.
52.3515 Color.
52.3516 Defects.
52.3517 Tenderness and maturity.

METHODS OF ANALYSES

52.3518 Brine flotation test.

LOT INSPECTION AND CERTIFICATION

52.3519 Ascertaining the grade of a lot.

SCORE SHEET

52.3520 Score sheet for frozen peas.

Subpart—United States Standards for Grades of Frozen Peaches

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.3551 Product description.
52.3552 Varietal types of frozen peaches.
52.3553 Styles of frozen peaches.
52.3554 Grades of frozen peaches.

FACTORS OF QUALITY

52.3555 Ascertaining the grade of a sample unit.
52.3556 Ascertaining the rating for the factors which are scored.
52.3557 Color.
52.3558 Size and symmetry.
52.3559 Defects.
52.3560 Character.

METHODS OF ANALYSIS

52.3561 Determination of drained fruit.

Lot Inspection and Certification

52.3562 Ascertaining the grade of a lot.

Score Sheet

52.3563 Score sheet for frozen peaches.

Subpart—United States Standards for Grades of Canned Squash (Summer Type)

Product Description, Styles, and Grades

52.3581 Product description.
52.3582 Styles of canned squash.
52.3583 Grades of canned squash.

Fill of Container and Drained Weights

52.3584 Recommended fill of container.
52.3585 Drained weights.

Factors of Quality

52.3586 Ascertaining the grade.
52.3587 Ascertaining the rating for the factors which are scored.
52.3588 Color.
52.3589 Defects.
52.3590 Character.

Lot Inspection and Certification

52.3591 Ascertaining the grade of a lot.

Score Sheet

52.3592 Score sheet for canned squash.

Subpart—United States Standards for Grades of Tomato Juice

52.3621 Product description.
52.3622 Definitions of terms.
52.3623 Recommended sample unit sizes.
52.3624 Grades.
52.3625 Recommended fill of container.
52.3626 Factors of quality and analysis.
52.3627 Requirements for grades.
52.3628 Sample size.
52.3629 Lot quality requirements.

Subpart—United States Standards for Grades of Sugarcane Molasses

Product Description and Grades

52.3651 Product description.
52.3652 Grades of sugarcane molasses.

Fill of Container

52.3653 Recommended fill of container.

Factors of Quality

52.3654 Ascertaining the grade.
52.3655 Required Brix solids, total sugar, ash, total sulfites.
52.3656 Compliance with the required Brix solids and total sugar and the maximum ash content.
52.3657 Ascertaining the rating for the factors which are scored.
52.3658 Color.
52.3659 Defects.

Definitions and Methods of Analysis

52.3660 Methods of Analysis.
52.3661 Color of sugarcane molasses.
52.3662 Application of USDA permanent glass color standards in classifying the color of sugarcane molasses.
52.3663 Brix solids.
52.3664 Ash.
52.3665 Sulfur dioxide, p.p.m.
52.3666 Reducing sugars.
52.3667 Sucrose.
52.3668 Total sugar.

Lot Inspection and Certification

52.3669 Ascertaining the grade of a lot.

Score Sheet

52.3670 Score sheet for sugarcane molasses.

Subpart—United States Standards for Grades of Frozen Turnip Greens With Turnips

Product Description, Styles, Color, Proportion of Ingredients, and Grades

52.3731 Product description.
52.3732 Styles of frozen turnip greens with turnips.
52.3733 Color of turnips in frozen turnip greens with turnips.
52.3734 Recommended proportion of ingredients.
52.3735 Grades of frozen turnip greens with turnips.

Factors of Quality

52.3736 Ascertaining the grade.
52.3737 Ascertaining the ratings for the factors which are scored.
52.3738 Color.
52.3739 Defects.
52.3740 Character.

Explanation and Methods of Analysis

52.3741 Explanation and methods of analysis.

Lot Inspection and Certification

52.3742 Ascertaining the grade of a lot.

Score Sheet

52.3743 Score sheet for frozen turnip greens with turnips.

Subpart—United States Standards for Grades of Canned Ripe Olives

Product Description, Types, Styles, and Grades

52.3751 Product description.

52.3752 Types of canned ripe olives.
52.3753 Styles of canned ripe olives.
52.3754 Size designations for whole and pitted styles.
52.3755 Minimum drained weights.
52.3756 Grades of canned ripe olives.
52.3757 Standard sample unit size.
52.3758 Determining the grade of a sample unit.
52.3759 Determining the rating for the factors which are scored.
52.3760 Color.
52.3761 Defects.
52.3762 Character.
52.3763 Determining the grade of a lot.
52.3764 Score sheet.

Subpart—United States Standards for Grades of Canned Fruits for Salad

PRODUCT DESCRIPTION AND GRADES

52.3831 Product description.
52.3832 Grades.

PROPORTIONS AND FORMS OF FRUIT

52.3833 Proportions and forms of fruit.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.3834 Liquid media and Brix measurements.
52.3835 Recommended fill of container.
52.3836 Recommended minimum drained weight.
52.3837 Recommended minimum fill weights.

FACTORS OF QUALITY

52.3838 Ascertaining the grade.
52.3839 Ascertaining the rating for the factors which are scored.
52.3840 Color.
52.3841 Uniformity of count and size.
52.3842 Absence of defects.
52.3843 Character.

LOT INSPECTION AND CERTIFICATION

52.3844 Ascertaining the grade of a lot.

SCORE SHEET

52.3845 Score sheet.

Subpart—United States Standards for Grades of Dehydrated, Low-Moisture Apricots

PRODUCT DESCRIPTION, MOISTURE, STYLES, AND GRADES

52.3871 Product description.
52.3872 Moisture of low-moisture apricots.
52.3873 Styles of low-moisture apricots.
52.3874 Grades of low-moisture apricots.

FACTORS OF QUALITY

52.3875 Ascertaining the grade.
52.3876 Ascertaining the rating for the factors which are scored.
52.3877 Color.
52.3878 Uniformity of size.
52.3879 Absence of defects.
52.3880 Texture.

EXPLANATION AND METHODS OF ANALYSES

52.3881 Explanations of methods and analyses.

LOT INSPECTION AND CERTIFICATION

52.3882 Ascertaining the grade of a lot.

SCORE SHEET

52.3883 Score sheet for low-moisture apricots.

Subpart—United States Standards for Grades of Dehydrated, Low-Moisture Peaches

PRODUCT DESCRIPTION, MOISTURE, STYLES, AND GRADES

52.3911 Product description.
52.3912 Moisture of low-moisture peaches.
52.3913 Styles of low-moisture peaches.
52.3914 Grade of low-moisture peaches.

FACTORS OF QUALITY

52.3915 Ascertaining the grade.
52.3916 Ascertaining the rating for the factors which are scored.
52.3917 Color.
52.3918 Uniformity of size.
52.3919 Absence of defects.
52.3920 Texture.

EXPLANATIONS AND METHODS OF ANALYSES

52.3921 Explanations of methods and analyses.

LOT INSPECTION AND CERTIFICATION

52.3922 Ascertaining the grade of a lot.

SCORE SHEET

52.3923 Score sheet for low-moisture peaches.

Subpart—United States Standards for Grades of Concentrated Lemon Juice for Manufacturing

PRODUCT DESCRIPTION AND GRADES

52.3951 Product description.
52.3952 Grades of concentrated lemon juice for manufacturing.

FILL OF CONTAINER

52.3953 Recommended fill of container.

PULP REQUIREMENTS

52.3954 Pulp.

CONCENTRATION

52.3955 Degree of concentration.

FACTORS OF QUALITY

52.3956 Ascertaining the grade of a sample unit.
52.3957 Ascertaining the rating for the factors which are scored.
52.3958 Color.
52.3959 Defects.
52.3960 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.3961 Definitions of terms.

LOT INSPECTION AND CERTIFICATION

52.3962 Ascertaining the grade of a lot.

SCORE SHEET

52.3963 Score sheet for concentrated lemon juice for manufacturing.

Subpart—United States Standards for Grades of Canned Grapes

PRODUCT DESCRIPTION AND GRADES

52.4021 Product description.
52.4022 Grades.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

52.4023 Liquid media and Brix measurements.
52.4024 Recommended fill of container.
52.4025 Recommended minimum drained weights.
52.4026 Recommended minimum fill weights.

FACTORS OF QUALITY

52.4027 Ascertaining the grade.
52.4028 Ascertaining the rating for the factors which are scored.
52.4029 Color.
52.4030 Uniformity of size.
52.4031 Absence of defects.
52.4032 Character.

LOT INSPECTION AND CERTIFICATION

52.4033 Ascertaining the grade of a lot.

SCORE SHEET

52.4034 Score sheet.

Subpart—United States Standards for Grades of Frozen Breaded Onion Rings

PRODUCT DESCRIPTION, TYPES, AND GRADES

52.4061 Product description.
52.4062 Types of frozen onion rings.
52.4063 Grades of frozen onion rings.

FACTORS OF QUALITY

52.4064 Ascertaining the grade.
52.4065 Ascertaining the rating for the factors which are scored.
52.4066 Color.
52.4067 Defects.
52.4068 Character.

METHOD OF ANALYSIS

52.4069 Method of analysis.

LOT INSPECTION AND CERTIFICATION

52.4070 Ascertaining the grade of a lot.

SCORE SHEET

52.4071 Score sheet for frozen breaded onion rings.

Subpart—United States Standards for Grades of Frozen Sweetpotatoes

PRODUCT DESCRIPTION, COLOR, STYLES, AND GRADES

52.5001 Product description.
52.5002 Colors of frozen sweetpotatoes.
52.5003 Styles of frozen sweetpotatoes.
52.5004 Grades of frozen sweetpotatoes.

FACTORS OF QUALITY

52.5005 Ascertaining the grade of a sample unit.
52.5006 Color.
52.5007 Uniformity of size.
52.5008 Defects.
52.5009 Character.

EXPLANATION AND METHOD OF ANALYSIS

52.5010 Preparation by heating.

LOT INSPECTION AND CERTIFICATION

52.5011 Ascertaining the grade of a lot.

SCORE SHEET

52.5012 Score sheet for frozen sweetpotatoes.

Subpart—United States Standards for Grades of Tomato Paste

52.5041 Product description.
52.5042 Concentration.
52.5043 Texture.
52.5044 Grades.
52.5045 Recommended fill of container.
52.5046 Determining the grade of a sample unit.
52.5047 Determining the rating for the factors which are scored.
52.5048 Color.
52.5049 Defects.
52.5050 Determining the grade of a lot.
52.5051 Score sheet.

Subpart—United States Standards for Grades of Canned Tomato Puree (Tomato Pulp)

52.5081 Product description.
52.5082 Concentration.
52.5083 Texture.
52.5084 Grades.
52.5085 Fill of container.
52.5086 Determining the grade of a sample unit.
52.5087 Determining the rating for the factors which are scored.
52.5088 Color.
52.5089 Defects.
52.5090 Determining the grade of a lot.
52.5091 Score sheet.

Subpart—United States Standards for Grades of Canned Tomatoes

52.5161 Product description.
52.5162 Styles.
52.5163 Type of pack.
52.5164 Definitions of terms.
52.5165 Fill of container.
52.5166 Minimum drained weight averages.
52.5167 Sample unit sizes.
52.5168 Grades.
52.5169 Factors of quality.
52.5170 Requirements for grades.
52.5171 Determining the grade of a lot.

Subpart—United States Standards for Grades of Concentrated Tomato Juice

PRODUCT DESCRIPTION AND GRADES

52.5201 Product description.
52.5202 Grades of concentrated tomato juice.

FILL OF CONTAINER

52.5203 Recommended fill of container.

FACTORS OF QUALITY

52.5204 Ascertaining the grade of a sample unit.
52.5205 Color.
52.5206 Consistency.
52.5207 Defects.
52.5208 Flavor.

LOT INSPECTION AND CERTIFICATION

52.5209 Ascertaining the grade of a lot.

SCORE SHEET

52.5210 Score sheet for concentrated tomato juice.

Subpart—United States Standards for Grades of Frozen Speckled Butter (Lima) Beans

PRODUCT DESCRIPTION AND GRADES

52.5241 Product description.
52.5242 Grades of frozen beans.

FACTORS OF QUALITY

52.5243 Ascertaining the grade of a sample unit.
52.5244 Ascertaining the rating for the factors which are scored.
52.5245 Color.
52.5246 Defects.
52.5247 Character.

METHODS OF ANALYSES

52.5248 Cooking procedure.

LOT INSPECTION AND CERTIFICATION

52.5249 Ascertaining the grade of a lot.

SCORE SHEET

52.5250 Score sheet for frozen speckled butter (lima) beans.

Subpart—United States Standards for Grades of Frozen Melon Balls

PRODUCT DESCRIPTION, TYPES, AND GRADES

52.5361 Product description.
52.5362 Types of frozen melon balls.
52.5363 Grades for frozen melon balls.

FACTORS OF QUALITY

52.5364 Ascertaining the grade of a sample unit.
52.5365 Ascertaining the rating for the factors which are scored.
52.5366 Color.
52.5367 Uniformity of size and shape.
52.5368 Absence of defects.
52.5369 Character.

LOT INSPECTION AND CERTIFICATION

52.5370 Ascertaining the grade of a lot.

SCORE SHEET

52.5371 Score sheet for frozen melon balls.

Subpart—United States Standards for Grades of Green Olives

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

52.5441 Product description.
52.5442 Types of green olive pack.
52.5443 Styles of green olives.
52.5444 Grades of green olives.

SIZE DESIGNATIONS

52.5445 Sizes of whole style green olives.
52.5446 Size of pitted and stuffed styles of green olives.

RECOMMENDED MINIMUM DRAINED WEIGHTS

52.5447 Recommended minimum drained weights.
52.5448 Compliance with recommended minimum drained weights.

FACTORS OF QUALITY

52.5449 Ascertaining the grade of a sample unit.
52.5450 Ascertaining the rating for the factors which are scored.
52.5451 Color.
52.5452 Uniformity of size.
52.5453 Absence of defects.
52.5454 Character.

DEFINITION OF TERMS AND METHODS OF ANALYSIS

52.5455 Definition of terms.
52.5456 Methods of analysis.

LOT COMPLIANCE

52.5457 Ascertaining the grade of a lot.

SCORE SHEET

52.5458 Score sheet for green olives.

Subpart—United States Standards for Grades of Canned Lemon Juice

PRODUCT DESCRIPTION, GRADES, FILL OF CONTAINER

52.5481 Product description.
52.5482 Grades of canned lemon juice.

FILL OF CONTAINER

52.5483 Recommended fill of container.

FACTORS OF QUALITY

52.5484 Ascertaining the grade of a sample unit.
52.5485 Ascertaining the rating for the factors which are scored.
52.5486 Color.
52.5487 Defects.
52.5488 Flavor.

EXPLANATIONS AND METHODS OF ANALYSES

52.5489 Definition of terms.
52.5490 Methods of analysis.

LOT INSPECTION AND CERTIFICATION

52.5491 Ascertaining the grade of a lot.

SCORE SHEET

52.5492 Score sheet for canned lemon juice.

Subpart—United States Standards for Grades of Frozen Apricots

PRODUCT DESCRIPTION, STYLES, AND GRADES

52.5521 Product description.
52.5522 Styles of frozen apricots.
52.5523 Grades of frozen apricots.

FACTORS OF QUALITY

52.5524 Ascertaining the grade of a sample unit.
52.5525 Ascertaining the rating for factors which are scored.
52.5526 Color.
52.5527 Size and symmetry.
52.5528 Defects.
52.5529 Character.

LOT COMPLIANCE

52.5530 Ascertaining the grade of a lot.

SCORE SHEET

52.5531 Score sheet for frozen apricots.

Subpart—United States Standards for Grades of Canned Dried Prunes

PRODUCT DESCRIPTION, TYPES AND VARIETIES, AND GRADES

52.5601 Product description.
52.5602 Types and varieties of canned dried prunes.
52.5603 Grades of canned dried prunes.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, COUNTS

52.5604 Liquid media and Brix measurements.
52.5605 Recommended fill of container.
52.5606 Recommended minimum drained weights.
52.5607 Count of prunes.

FACTORS OF QUALITY

52.5608 Ascertaining the grade.
52.5609 Ascertaining the rating of each factor.
52.5610 Color.
52.5611 Uniformity of size.
52.5612 Absence of defects.
52.5613 Character of fruit.

EXPLANATION OF TERMS

52.5614 Explanation of terms.

LOT COMPLIANCE

52.5615 Ascertaining the grade of a lot.

SCORE SHEET

52.5616 Score sheet for canned dried prunes.

Subpart—United States Standards for Grades of Dried Apricots

PRODUCT DESCRIPTION, MOISTURE, SIZES

52.5761 Product description.
52.5762 Moisture.
52.5763 Sizes.

GRADES OF DRIED APRICOTS (OTHER THAN SLAB GRADES)

52.5764 U.S. Grade A or U.S. Fancy.
52.5765 U.S. Grade B or U.S. Choice.

52.5766 U.S. Grade C or U.S. Standard.
52.5767 U.S. Grade D or Substandard.

GRADES OF DRIED APRICOTS (SLABS)

52.5768 U.S. Grade A (Slabs) or U.S. Fancy (Slabs).
52.5769 U.S. Grade B (Slabs) or U.S. Choice (Slabs).
52.5770 U.S. Grade C (Slabs) or U.S. Standard (Slabs).
52.5771 U.S. Grade D (Slabs) or Substandard (Slabs).

EXPLANATION OF TERMS

52.5772 Explanation of terms.

WORK SHEET

52.5773 Work sheet and summary of requirements for dried apricots.

Subpart—United States Standards for Grades of Dried Peaches

PRODUCT DESCRIPTION, MOISTURE, TYPES AND VARIETIES, SIZES

52.5801 Product description.
52.5802 Moisture.
52.5803 Types and varieties of dried peaches.
52.5804 Sizes of dried peaches.

GRADES OF DRIED PEACHES

52.5805 U.S. Grade A or U.S. Fancy.
52.5806 U.S. Grade B or U.S. Choice.
52.5807 U.S. Grade C or U.S. Standard.
52.5808 U.S. Grade D or Substandard.

EXPLANATION OF TERMS

52.5809 Explanation of terms.

WORK SHEET

52.5810 Work sheet and summary of requirements for dried peaches.

Subpart—United States Standards for Grades of Dried Pears

PRODUCT DESCRIPTION, MOISTURE, SIZES

52.5841 Product description.
52.5842 Moisture.
52.5843 Sizes of dried pears.

GRADES FOR DRIED PEARS

52.5844 U.S. Grade A or U.S. Fancy.
52.5845 U.S. Grade B or U.S. Choice.
52.5846 U.S. Grade C or U.S. Standard.
52.5847 U.S. Grade D or Substandard.

EXPLANATION OF TERMS

52.5848 Explanation of terms.

WORK SHEET

52.5849 Work sheet and summary of requirements for dried pears.

Subpart—United States Standards for Grades of Frozen Berries

PRODUCT DESCRIPTION, TYPES

52.5881 Product description.
52.5882 Types of frozen berries.

GRADES OF FROZEN BERRIES

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GRADES OF FROZEN BERRIES FOR MANUFACTURING

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52.5891 Ascertaining the grade of a lot.

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52.6081 Product description.

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PRODUCT DESCRIPTION, STYLES, AND GRADES

52.6241 Product description.
52.6242 Styles.
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FILL OF CONTAINER, DRAINED WEIGHTS

52.6244 Recommended fill of container.
52.6245 Recommended minimum drained weight.

SAMPLE UNIT SIZE

52.6246 Sample unit size.

FACTORS OF QUALITY

52.6247 Ascertaining the grade of a sample unit.
52.6248 Ascertaining the rating for the factors which are scored.
52.6249 Color.
52.6250 Defects.
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[1] "RS" is an abbreviation for refiners' sirup."

Allowances for Quality Factors

52.6252 Allowances for quality factors for canned solid-pack apricots.

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52.6253 Ascertaining the grade of a lot

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52.6254 Score sheet for canned solid-pack apricots.

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Product Description and Grades

52.6281 Product description.
52.6282 Grades of frozen cranberries.

Sample Unit Size

52.6283 Sample unit size.

Factors of Quality

52.6284 Ascertaining the grade of a sample unit.
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Lot Compliance

52.6289 Ascertaining the grade of a lot.

Score Sheet

52.6290 Score sheet for frozen cranberries.

Subpart—United States Standards for Grades of Frozen Concentrated Apple Juice

Product Description and Grades

52.6321 Product description.
52.6322 Brix requirements.
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52.6324 Recommended fill of container.

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52.6403 Grades.
52.6404 Determining the grade.
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52.6444 Sample unit size.
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52.6446 Determining the rating for the factors which are scored.
52.6447 Consistency.
52.6448 Absence of defects.
52.6449 Character.
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52.6451 Score sheet for canned pork and beans.

Subpart—United States Standards for Grades of Canned Baked Beans

52.6461 Product description.
52.6462 Types.
52.6463 Styles.
52.6464 Grades.
52.6465 Sample unit size.
52.6466 Determining the grade.
52.6467 Determining the rating of the factors which are scored.
52.6468 Color.
52.6469 Consistency.
52.6470 Flavor.
52.6471 Character.
52.6472 Absence of defects.
52.6473 Determining the grade of a lot.
52.6474 Score sheet for canned baked beans.

Subpart—United States Standards for Grades of Canned Celery

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52.6572 Types of pack.
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52.6574 Definitions of terms.
52.6575 Recommended fill of container.
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52.6577 Recommended sample unit size.
52.6578 Grades.
52.6579 Factors of quality.
52.6580 Requirements for grades.

52.6581 Sample size.
52.6582 Lot quality requirements.

AUTHORITY: Agricultural Marketing Act of 1946, secs. 203, 205, 60 Stat. 1087, as amended, 1090, as amended (7 U.S.C. 1622, 1624).

EDITORIAL NOTE: Nomenclature changes to Part 52 appear at 46 FR 63203, Dec. 31, 1981.

Subpart—Regulations Governing Inspection and Certification

SOURCE: 22 FR 3535, May 22, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.1 Administration of regulations.

(a) The Administrator, Agricultural Marketing Service, United States Department of Agriculture is charged with the administration of the regulations in this part except that he may delegate any or all of such functions to any officer or employee of the Agricultural Marketing Service of the Department, in his discretion.

(b) All services provided under the regulations of this part, including the hiring and licensing of inspection, grading, and sampling personnel shall be conducted without discrimination because of race, color, sex, religion, or national origin.

[22 FR 3535, May 22, 1957, as amended at 38 FR 25166, Sept. 12, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

DEFINITIONS

§ 52.2 Terms defined.

Words in the regulations in this part in the singular form shall be deemed to import the plural and vice versa, as the case may demand. For the purposes of the regulations in this part, unless the context otherwise requires, the following terms shall have the following meanings:

Acceptance number. "Acceptance number" means the number in a sampling plan that indicates the maximum number of deviants permitted in a sample of a lot that meets a specific requirement.

Act. "Act" means the applicable provisions of the Agricultural Marketing Act of 1946 (60 Stat. 1087 et seq., as amended; 7 U.S.C. 1621 et seq.), or any other act of Congress conferring like authority.

Administrator. "Administrator" means the Administrator of the Agricultural Marketing Service.

Applicant. "Applicant" means any interested party who requests inspection service under the regulations in this part.

Approved plant. See "Plant, approved".

Case. "Case" means the number of containers (cased or uncased) which, by the particular industry are ordinarily packed in a shipping container.

Case or shipping case. "Case" or "shipping case" means a unit consisting of a given number of primary containers of the same size, the number and arrangement per unit conforming to customary trade practice. For products not physically assembled into a shipping case (i.e. stacked bright) *case* means simulating the containers in such lot into a unit consisting of the same number of primary containers corresponding to customary trade practice (or corresponding to the unit as defined above).

Certificate of loading. Certificate of loading means a statement, either written or printed, issued pursuant to the regulations in this part, relative to checkloading of a processed product subsequent to inspection thereof. The certificate of loading may be issued in lieu of an official inspection certificate when the same inspection procedures are applied and when authorized by the Administrator.

Certificate of sampling. "Certificate of sampling" means a statement, either written or printed issued pursuant to the regulations in this part, identifying officially drawn samples and may include a description of condition of containers and the condition under which the processed product is stored.

Class. See "Grade."

Commodities Scientific Support Division (CSSD). A Division of the Agricultural marketing Service (AMS) which performs analytical laboratory testing services for AMS.

Condition. "Condition" means the degree of soundness of the product which may affect its merchantability and includes, but is not limited to those factors which are subject to change as a result of age, improper preparation and processing, imporper packaging, improper storage or improper handling.

Department. "Department" means the United States Department of Agriculture.

Deviant. "Deviant" means a sample unit affected by one or more deviations or a sample unit that varies in a specifically defined manner from the requirements of a standard, specification, or other inspection document.

Deviation. "Deviation" means any specifically defined variation from a particular requirement.

Grade or class. "Grade" or "class" designates a level or rank of quality.

Grader. See "Inspector".

In-plant sampler. In-plant sampler means any employee of the Department authorized by the Administrator to draw samples of processed products and perform a limited number of miscellaneous duties in a plant operating under contract.

Inspection certificate. "Inspection certificate" means a statement, either written or printed, issued pursuant to the regulations in this part, setting forth in addition to appropriate descriptive information relative to a processed product, and the container thereof, the quality and condition, or any part thereof, of the product and may include a description of the conditions under which the product is stored.

Inspection service. (See *Inspection service, general below.*)

Inspection service, general:

(a) The sampling pursuant to the regulations in this part;

(b) The determination pursuant to the regulations in this part of:

(1) Essential characteristics such as style, type, size, sirup density or identity of any processed product which differentiates between major groups of the same kind;

(2) The class, quality and condition of any processed product, including the condition of the container thereof by the examination of appropriate samples;

(c) The issuance of any certificate of sampling, inspection certificates, or certificates of loading of a processed product, or any report relative to any of the foregoing; or

(d) Performance by an inspector of any related services such as observing the preparation of the product from its raw state through each step in the entire process; observing conditions under which the product is prepared, processed, and packed; or observing plant sanitation as a prerequisite to the inspection of the processed product, either on a continuous or periodic basis, or checkloading the inspected processed product in connection with the distribution or marketing thereof.

Inspection Service; types of. (a) Lot inspection means the inspection and grading of specific lots of processed fruits and vegetables which are located in plant warehouses, commercial storage, railway cars, trucks, or any other conveyance or storage facility.

(b) Approved plant-lot inspection means the inspection and grading of specific lots of processed fruits and vegetables which are located in plant warehouses, commercial storage, railway cars, trucks, or any other conveyance or storage facility. However, under "approved plant-lot inspection", the inspection service has knowledge that the products were processed or packaged in plants meeting the "plant approved" definition. This means that the plant facilities, sanitation, and methods of operation have been surveyed and approved for specific product(s) by the Administrator as suitable and adequate for inspection or grading service in accordance with § 52.81 through § 52.83 of this part.

(c) Continuous inspection is the conduct of inspection and grading services in an approved plant whereby one or more inspector(s) are present at all times the plant is in operation to make in-process checks on the preparation, processing, packing, and warehousing of all products under contract and to assure compliance with sanitary requirements.

(d) Pack certification is the conduct of inspection and grading services in an approvement plant whereby one or more inspector(s) may make inspection of the preparation and processing of products under contract, but are not required to be present at all times the plant is in operation.

(1) Under a Designated Lot-contract, inspector(s) will grade and certify only those lots designated by the applicant.

(2) Under a Quality Assurance contract, inspector(s) will use information available from the applicant's quality control records to certify lots, as requested, and will grade lots at random as often as necessary to verify the reliability of the applicant's quality control system.

Inspector or grader. "Inspector" or "grader" means any employee of the Department authorized by the Secretary or any other person licensed by the Secretary to investigate, sample, inspect, and certify in accordance with the regulations in this part to any interested party the class, quality and condition of processed products covered in this part and to perform related duties in connection with the inspection service.

Inspector in charge. "Inspector in Charge" means any inspector designated on a plant working shift or in a field office laboratory as the inspector in charge of the inspection work when authorized by the Administrator to act in that capacity.

Inspector, subordinate. "Subordinate inspector" means any inspector assigned to a plant or field office to work under the direction of an inspector-in-charge.

Inspector's aide. "Inspector's aide" means any employee of the Department authorized to perform a limited number and type of duties under the close supervision of an inspector.

Interested party. "Interested party" means any person who has a financial interest in the commodity involved.

Licensed sampler. "Licensed sampler" means any person who is authorized by the Secretary to draw samples of processed products for inspection service, to inspect for identification and condition of containers in a lot, and may, when authorized by the Administrator, perform related services under the act and the regulations in this part.

Lot. Lot means any number of containers of the same size and type which contain a processed product of the same type and style located in the same warehouse or conveyance, and which is available for inspection service at any time: Provided, that the number of containers comprising lot may not exceed the maximum number specified in the sampling plans in § 52.38 of this Subpart: And further provided that;

(a) If the applicant requests a separate inspection certificate covering a specific portion of a lot, such portion must be separately marked or otherwise identified in such a manner as to permit sampling, inspection, and certification of such portion as a separate lot; and

(b) Under in-plant (in-process) inspection, the inspector is authorized to limit the number of containers of a processed product that may be included in a lot to a period of consecutive production equivalent to one production shift with a maximum of 24 hours of consecutive production.

Officially drawn sample. "Officially drawn sample" means any sample that has been selected from a particular lot by an inspector, licensed sampler, or by any other person authorized by the Administrator pursuant to the regulations in this part.

Person. "Person" means any individual, partnership, association, business trust, corporation, any organized group of persons (whether incorporated or not), the United States (including, but not limited to, any corporate agencies thereof), any State, county, or municipal government, any common carrier, and any authorized agent of any of the foregoing.

Plant. "Plant" means the premises, buildings, structure, and equipment (including, but not being limited to machines, utensils, vehicles, and fixtures located in or about the premises) used or employed in the preparation, processing, handling, transporting and storage of fruits and vegetables, or the processed products thereof.

Plant, approved. "Approved plant" means any plant in which the facilities, sanitation, and methods of operation have been surveyed and approved for specific product(s) by the Administrator as suitable and adequate for inspection or grading service in accordance with §§ 52.81 through 52.83.

Processed product. "Processed product" means any fruit, vegetable, or other food product covered under the regulations in this part which has been preserved by any recognized commercial process, including, but not limited to canning, freezing, dehydrating, drying, the addition of chemical substances, or by fermentation.

Quality. "Quality" means the inherent properties of any processed product which determine the relative degree of excellence of such product, and includes the effects of preparation and processing, and may or may not include the effects of packing media, or added ingredients.

Rejection number. "Rejection number" means the number in a sampling plan that indicates the minimum number of deviants in a sample that will cause a lot to fail a specific requirement.

Sample. "Sample" means any number of sample units to be used for inspection.

Sample unit. "Sample unit" means a container and/or its entire contents, a portion of the contents of one or more containers or other unit of commodity, or a composite mixture of a product used for inspection.

Sampling. "Sampling" means the act of selecting samples of processed products for the purpose of inspection under the regulations in this part.

Secretary. "Secretary" means the Secretary of the Department or any other officer or employee of the Department authorized to exercise the powers and to perform the duties of the Secretary in respect to the matters covered by the regulations in this part.

Shipping container. "Shipping container" means an individual container designed for shipping a number of packages or cans ordinarily packed in a container for shipping or designed for packing unpackaged processed products for shipping.

Unofficial sample. Unofficial sample means any sample that has been selected by any person other than an inspector or licensed sampler, or by any other person not authorized by the Administrator pursuant to the regulations in this part.

[22 FR 3535, May 22, 1957, as amended at 33 FR 9582, July 2, 1968; 35 FR 14061, Sept. 4, 1970; 38 FR 25166, Sept. 12, 1973 38 FR 26903, Sept. 27, 1973, 40 FR 48934, Oct. 20, 1975. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and further amended at 51 FR 20438, June 5, 1986; 55 FR 48102, Nov. 19, 1990]

§ 52.3 Designation of official certificates, memoranda, marks, other identifications, and devices for purposes of the Agricultural Marketing Act.

Subsection 203(h) of the Agricultural Marketing Act of 1946, as amended by Pub. L. 272, 84th Congress, provides criminal penalties for various specified offenses relating to official certificates, memoranda, marks or other identifications, and devices for making such marks or identifications, issued or authorized under section 203 of said act, and certain misrepresentations concerning the inspection or grading of agricultural products under said section. For the purposes of said subsection and the provisions in this part, the terms listed below shall have the respective meanings specified:

Official certificate. "Official certificate" means any form of certification, either written or printed, including those defined in § 52.2, used under this part to certify with respect to the inspection, class, grade, quality, size, quantity, or condition of products (including the compliance of products with applicable specifications).

Official device. "Official device" means a stamping appliance, branding device, stencil, printed label, or any other mechanically or manually operated tool that is approved by the Administrator for the purpose of applying any official mark or other identification to any product or the packaging material thereof; or any device approved and designated by the Administrator as a USDA official device for use as a color standard, defect guide, or other similar aid to interpret the United States Department of Agriculture grade standards and to facilitate conduct of the inspection service.

Official identification. "Official identification" means any United States (U.S.) standard designation of class, grade, quality, size, quantity, or condition specified in this part or any symbol, stamp, label, or seal indicating that the product has been graded or inspected and/or indicating the class, grade, quality, size, quantity, or condition of the product approved by the Administrator and authorized to be affixed to any product, or affixed to or printed on the packaging material of any product.

Official mark "Official mark" means the grade mark, inspection mark, combined form of inspection and grade mark, and any other mark, or any variations in such marks, including those prescribed in § 52.53 approved by the Administrator and authorized to be affixed to any product, or affixed to or printed on the packaging material of any product, stating that the product was graded or inspected or both, or indicating the appropriate U.S. Grade or condition of the product, or for the purpose of maintaining the identity of products graded or inspected or both under this part.

Official memorandum. "Official memorandum" means any initial record of findings made by an authorized person in the process of grading, inspecting, or sampling pursuant to this part, any processing or plant-operation report made by an authorized person in connection with grading, inspecting, or sampling under this part, and any report made by an authorized person of services performed pursuant to this part.

[22 FR 3535, May 22, 1957, as amended at 23 FR 4999, July 1, 1958. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

INSPECTION SERVICE

§ 52.4 Where inspection service is offered.

Inspection service may be furnished wherever any inspector or licensed sampler is available and the facilities and conditions are satisfactory for the conduct of such service.

§ 52.5 Who may obtain inspection service.

An application for inspection service may be made by any interested party, including, but not limited to, the United States and any instrumentality or agency thereof, any State, county, municipality, or common carrier, and any authorized agent in behalf of the foregoing.

§ 52.6 How to make application.

An application for inspection service may be made to the office of inspection or to any inspector, at or nearest the place where the service is desired. An up-to-date list of the Inspection Field Offices of the Department may be obtained upon request to the Administrator. Satisfactory proof that the applicant is an interested party shall be furnished.

§ 52.7 Information required in connection with application.

(a) Application for inspection service shall be made in the English language and may be made orally (in person or by telephone), in writing, or by telegraph. If an application for inspection service is made orally, written confirmation may be required by the inspection service involved.

(b) In connection with each application for inspection service, there shall be furnished such information as may be necessary to perform an inspection on the processed product(s), including but not limited to, the name of the product, name and address of the packer or plant where such product was packed, the location of the product, its lot or car number, codes or other identification marks, the number of containers, the type and size of the containers, the interest of the applicant in the product, whether the lot has been inspected previous to the application by any Federal agency and the purpose for which inspection is desired.

[51 FR 20439, June 5, 1986]

§ 52.8 Filing of application.

An application for inspection service shall be regarded as filed only when made in accordance with the regulations in this part.

§ 52.9 Record of filing time.

A record showing the date when each application for inspection or for an appeal inspection is received shall be maintained.

[51 FR 20439, June 5, 1986]

§ 52.10 When application may be rejected.

An application for inspection service may be rejected by the Administrator (a) for non-compliance by the applicant with the regulations in this part, (b) for non-payment for previous inspection services rendered, (c) when the product is not properly identifiable by code or other marks, or (d) when it appears that to perform the inspection service would not be to the best interests of the Government. Such applicant shall be promptly notified of the reason for such rejection.

§ 52.11 When application may be withdrawn.

An application for inspection service may be withdrawn by the applicant at any time before the inspection is performed: *Provided*, That, the applicant shall pay at the hourly rate prescribed in § 52.42 for the time incurred by the inspector in connection with such application, any travel expenses, telephone, telegraph or other expenses which have been incurred by the inspection service in connection with such application.

[22 FR 3535, May 22, 1957, as amended at 38 FR 25166, Sept. 12, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.12 Disposition of inspected sample.

Any sample of a processed product that has been used for inspection may be returned to the applicant, at his request and expense; otherwise it shall be destroyed, or disposed of to a charitable institution.

§ 52.13 Basis of inspection and grade or compliance determination

(a) Inspection service shall be performed on the basis of the appropriate United States standards for grades of processed products, Federal, Military, Veterans Administration or other government agency specifications, written contract specifications, or any written specification or instruction which is approved by the Administrator.

(b) Unless otherwise approved by the Administrator, compliance with such grade standards, specifications, or instructions shall be determined by evaluating the product, or sample, in accordance with the requirements of such standards, specifications or instructions: *Provided*, That when inspection for quality is based on any U.S. grade standard which contains a scoring system, the grade to be assigned to a lot is the grade indicated by the average of the total of the scores of the respective sample units: *Provided further*, That—

(1) Such sample complies with the applicable standards of quality promulgated under the Federal Food, Drug, and Cosmetic Act;

(2) Such sample complies with the product description;

(3) Such sample meets the indicated grade with respect to factors of quality which are not rated by score points; and

(4) With respect to those factors of quality which are rated by score points, each of the following requirements is met:

(i) None of the sample units falls more than one grade below the indicated grade because of any quality factor to which a limiting rule applies;

(ii) None of the sample units falls more than 4 score points below the minimum total score for the indicated grade;

(iii) The number of deviants does not exceed the applicable acceptance number indicated in the sampling plans contained in § 52.38 ("deviants", as used in this paragraph, means sample units that fall into the next grade below the indicated grade but do not score more than 4 points below the minimum total score for the indicated grade);

(5) If any of the provisions contained in paragraphs (b) (3) and (4) of this section are not met, the grade is determined by considering such provisions in connection with succeedingly lower grades until the grade of the lot, if assignable, is established; and

(6) When it is determined that a portion of a lot bearing a particular identification mark is of lower quality or deficient in other factors, the grade or compliance of the lot shall be no higher than that of the portion bearing the particular identification mark.

[22 FR 3535, May 22, 1957, as amended at 33 FR 9582, July 2, 1968. Redesignated at 42

FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.14 Order of inspection service.

Inspection service shall be performed, insofar as practicable, in the order in which applications therefor are made except that precedence may be given to any such applications which are made by the United States (including, but not being limited to, any instrumentality or agency thereof) and to any application for an appeal inspection.

§ 52.15 Postponing inspection service.

If the inspector determines that it is not possible to accurately ascertain the quality or condition of a processed product immediately after processing because the product has not reached equilibrium in color, sirup density, or drained weight, or for any other substantial reason, he may postpone inspection service for such period as may be necessary.

§ 52.16 Financial interest of inspector.

No inspector shall inspect any processed product in which he is directly or indirectly financially interested.

§ 52.17 Forms of certificates.

Inspection certificates, certificates of sampling or loading, and other memoranda concerning inspection service shall be issued on forms approved by the Administrator.

§ 52.18 Issuance of certificates.

(a) The person signing and issuing the certificate shall be one of the following:

(1) The inspector who performed the inspection.

(2) Another employee of the Inspection Service who has been given power of attorney by the inspector who performed the inspection and authorized by the Administrator to affix the inspector's signature to an inspection certificate.

(3) An inspector designated as the "inspector in charge," when the certificate represents composite inspection of several persons.

In all cases the inspection certificate shall be prepared in accordance with the facts set forth in the official memoranda made by the inspector or inspectors in connection with the inspection. Whenever a certificate is signed by a person under a power of attorney the certificate should so indicate. The signature of the holder of the power shall appear under the name of the inspector who personally inspected the product, and whenever a certificate issued is signed by an inspector in charge that title must appear in connection with the signature.

(b) A certificate of loading shall be issued and signed by the inspector or licensed sampler authorized to check the loading of a specific lot of processed products: *Provided*, That, another employee of the inspection service may sign such certificate of loading covering any processed product checkloaded by an inspector or licensed sampler when given power of attorney by such inspector or licensed sampler and authorized by the Administrator to affix the inspector's or licensed sampler's signature to a certificate of loading which has been prepared in accordance with the facts set forth in the notes made by the inspector or licensed sampler in connection with the checkloading of a specific lot of processed products.

[22 FR 3535, May 22, 1957, as amended at 35 FR 14061, Sept. 4, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.19 Issuance of corrected certificates.

A corrected inspection certificate may be issued by the inspector who issued the original certificate after distribution of a certificate if errors, such as incorrect dates, code marks, grade statements, lot or car numbers, container sizes, net or drained weights, quantities, or errors in any other pertinent information require the issuance of a corrected certificate. Whenever a corrected certificate is issued, such certificate shall supersede the inspection certificate which was issued in error and the superseded certificate shall become null and void after the issuance of the corrected certificate.

§ 52.20 Issuance of an inspection report in lieu of an inspection certificate.

A letter report in lieu of an inspection certificate may be issued by an inspector when such action appears to be more suitable than an inspection certificate: *Provided*, That, the issuance of such report is approved by the Administrator.

§ 52.21 Disposition of inspection certificates.

The original of any inspection certificate, issued under the regulations in this part, and not to exceed four copies thereof, if requested prior to issuance, shall be delivered or mailed promptly to the applicant, or person designated by the applicant. All other copies shall be filed in such manner as the Administrator may designate. Additional copies of any such certificates may be supplied to any interested party as provided in § 52.50.

§ 52.22 Report of inspection results prior to issuance of formal report.

Upon request of any interested party, the results of an inspection may be telegraphed or telephoned to him, or to any other person designated by him, at his expense.

APPEAL INSPECTION

§ 52.23 When appeal inspection may be requested.

An application for an appeal inspection may be made by any interested party who is dissatisfied with the results of an inspection as stated in an inspection certificate, if the lot of processed products can be positively identified by the inspection service as the lot from which officially drawn samples were previously inspected. Such application shall be made within thirty (30) days following the day on which the previous inspection was performed, except upon approval by the Administrator the time within which an application for appeal inspection may be made may be extended.

§ 52.24 Where to file for an appeal inspection and information required.

(a) Application for an appeal inspection may be filed with:

(1) The supervisor in the office that issued the inspection certificate on which the appeal covering the processed product is requested; or

(2) The inspector in charge of the office of inspection at or nearest the place where the processed product is located.

(b) The application for appeal inspection shall state the location of the lot of processed products and the reasons for the appeal; and date and serial number of the certificate covering inspection of the processed product on which the appeal is requested, and such application may be accompanied by a copy of the previous inspection certificate and any other information that may facilitate inspection. Such application may be made orally (in person or by telephone), in writing, or by telegraph. If made orally, written confirmation shall be made promptly.

[22 FR 3535, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 20439, June 5, 1986]

§ 52.25 When an application for an appeal inspection may be withdrawn.

An application for appeal inspection may be withdrawn by the applicant at any time before the appeal inspection is performed: *Provided*, That, the applicant shall pay at the hourly rate prescribed in § 52.42, for the time incurred by the inspector in connection with such application, any travel expenses, telephone, telegraph, or other expenses which have been incurred by the inspection service in connection with such application.

[22 FR 3535, May 22, 1957, as amended at 38 FR 25166, Sept. 12, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.26 When appeal inspection may be refused.

An application for an appeal inspection may be refused if:

(a) The reasons for the appeal inspection are frivolous or not substantial;

(b) The quality or condition of the processed product has undergone a material change since the inspection covering the processed product on which the appeal inspection is requested;

(c) The lot in question is not, or cannot be made accessible for the selection of officially drawn samples;

(d) The lot relative to which appeal inspection is requested cannot be positively identified by the inspector as the lot from which officially drawn samples were previously inspected; or

(e) There is noncompliance with the regulations in this part. Such applicant shall be notified promptly of the reason for such refusal.

§ 52.27 Who shall perform appeal inspection.

An appeal inspection shall be performed by an inspector or inspectors (other than the one from whose inspection the appeal is requested) authorized for this purpose by the Administrator and, whenever practical, such appeal inspection shall be conducted jointly by two such inspectors: *Provided,* That, the inspector who made the inspection on which the appeal is requested may be authorized to draw the samples when another inspector or licensed sampler is not available in the area where the product is located.

§ 52.28 Appeal inspection certificate.

After an appeal inspection has been completed, the lot(s) cannot be further appealed unless authorized by the Administrator. An appeal inspection certificate shall be issued, showing the results of such appeal inspection; and such certificate shall supersede the inspection certificate previously issued for the processed product involved. Each appeal inspection certificate shall clearly identify the number and date of the inspection certificate which it supersedes. The superseded certificate shall become null and void upon the issuance of the appeal inspection certificate and shall no longer represent the quality or condition of the processed product described therein. The inspector or inspectors issuing an appeal inspection certificate shall forward notice of such issuance to such persons as he considers necessary to prevent misuse of the superseded certificate if the original and all copies of such superseded certificate have not previously been delivered to the inspector or inspectors issuing the appeal inspection certificate. The provisions in the regulations in this part concerning forms and certificates, issuance of certificates, and disposition of certificates shall apply to appeal inspection certificates, except that copies of such appeal inspection certificates shall be furnished to all interested parties who received copies of the superseded certificate.

[51 FR 20439, June 5, 1986]

LICENSING OF SAMPLERS AND INSPECTORS

§ 52.29 Who may become licensed sampler.

Any person deemed to have the necessary qualifications may be licensed as a licensed sampler to draw samples for the purpose of inspection under the regulations in this part. Such a license shall bear the printed signature of the Secretary, and shall be countersigned by an authorized employee of the Department. Licensed samplers shall have no authority to inspect processed products under the regulations in this part except as to identification and condition of the containers in a lot. A licensed sampler shall perform his duties pursuant to the regulations in this part as directed by the Administrator.

§ 52.30 Application to become a licensed sampler.

Application to become a licensed sampler shall be made to the Administrator on forms furnished for that purpose. Each such application shall be signed by the applicant in his own handwriting, and the information contained therein shall be certified by him to be true, complete, and correct to the best of his knowledge and belief, and the application shall contain or be accompanied by:

(a) A statement showing his present and previous occupations, together with names of all employers for whom he has worked, with periods of service, during the ten years previous to the date of his application;

(b) A statement that, in his capacity as a licensed sampler, he will not draw samples from any lot of processed products with respect to which he or his employer is an interested party;

(c) A statement that he agrees to comply with all terms and conditions of the regulations in this part relating to duties of licensed samplers; and

(d) Such other information as may be requested.

§ 52.31 Inspectors.

Inspections will ordinarily be performed by employees under the Administrator who are employed as Federal Government employees for that purpose. However, any person employed under any joint Federal-State inspection service arrangement may be licensed, if otherwise qualified, by the Secretary to make inspections in accordance with this part on such processed products as may be specified in his license. Such license shall be issued only in a case where the Administrator is satisfied that the particular person is qualified to perform adequately the inspection service for which such person is to be licensed. Each such license shall bear the printed signature of the Secretary and shall be countersigned by an authorized employee of the Department. An inspector shall perform his duties pursuant to the regulations in this part as directed by the Administrator.

§ 52.32 Suspension or revocation of license of licensed sampler or licensed inspector.

Pending final action by the Secretary, the Administrator may, whenever he deems such action necessary, suspend the license of any licensed sampler, or licensed inspector, issued pursuant to the regulations in this part, by giving notice of such suspension to the respective licensee, accompanied by a statement of the reasons therefor. Within seven days after the receipt of the aforesaid notice and statement of reasons by such licensee, he may file an appeal, in writing, with the Secretary supported by any argument or evidence that he may wish to offer as to why his license should not be suspended or revoked. After the expiration of the aforesaid seven days period and consideration of such argument and evidence, the Secretary shall take such action as he deems appropriate with respect to such suspension or revocation.

§ 52.33 Surrender of license.

Upon termination of his services as a licensed sampler or licensed inspector, or suspension or revocation of his license, such licensee shall surrender his license immediately to the office of inspection serving the area in which he is located. These same provisions shall apply in a case of an expired license.

SAMPLING

§ 52.34 How samples are drawn by inspectors or licensed samplers.

An inspector or a licensed sampler shall select samples, upon request, from designated lots of processed products which are so placed as to permit thorough and proper sampling in accordance with the regulations in this part. Such person shall, unless otherwise directed by the Administrator, select sample units of such products at random, and from various locations in each lot in such manner and number, not inconsistent with the regulations in this part, as to secure a representative sample of the lot. Samples drawn for inspection shall be furnished by the applicant at no cost to the Department.

§ 52.35 Accessibility for sampling.

Each applicant shall cause the processed products for which inspection is requested to be made accessible for proper sampling. Failure to make any lot accessible for proper sampling shall be sufficient cause for postponing inspection service until such time as such lot is made accessible for proper sampling.

§ 52.36 How officially drawn samples are to be identified.

Officially drawn samples shall be marked by the inspector or licensed sampler so such samples can be properly identified for inspection.

§ 52.37 How official samples are to be identified and shipped.

Unless otherwise directed by the Administrator, samples which are to be shipped to any office of inspection shall be forwarded to the office of inspection serving the area in which the processed products from which the samples were drawn is located. Such samples shall be shipped in a manner to avoid any material change in the quality or condition of the sample of the processed product. Containers shall be identified and properly sealed with tape. A facsimile of the "Officially Sampled" stamp shall be placed over the taped container. All transportation charges in connection with such shipments of samples shall be at the expense of the applicant.

[51 FR 20439, June 5, 1986]

§ 52.38 Sampling plans and procedures for determining lot compliance.

(a) Except as otherwise provided for in this section in connection with in-plant inspection and unless otherwise approved by the Administrator, samples shall be selected from each lot in the exact number of sample units indicated for the lot size in the applicable sampling plans. The lot size is to correspond to a sample size with a maximum of 29 sample units: Provided, that at the discretion of the inspection service, the number of sample units selected may be increased to the exact number of sample units indicated for any one of the larger sample sizes provided for in the appropriate plans. The samples size may be increased beyond 29 sample units in accordance with the following sampling plan:

Sample Size	38	48	60
Acceptance Number	5	6	7

(b) Under the sampling plans with respect to any specified requirement:

(1) If the number of deviants (as defined in connection with the specific requirement) in the sample does not exceed the acceptance number prescribed for the sample size, the lot meets the requirement;

(2) If the number of deviants (as defined in connection with the specific requirement) in the sample exceeds the acceptance number prescribed for the sample size, the lot fails the requirement.

(c) If in the conduct of on-line in-plant inspection of a product covered by a grade standard which does not contain sampling plans, the sample is examined before the lot size is known and the number of sample units exceeds the prescribed sample size for such lot, but does not equal any of the prescribed larger sample sizes, the lot may be deemed to meet or fail a specific requirement in accordance with the following procedure:

(1) If the number of deviants (as defined in connection with the specific requirement) in the nonprescribed sample does not exceed the acceptance number of the next smaller sample size, the lot meets the requirement;

(2) If the number of deviants (as defined in connection with the specific requirement) in the nonprescribed sample equals the acceptance number prescribed for the next larger sample size, additional sample units shall be selected to increase the sample to the next larger prescribed sample size;

(3) If the number of deviants (as defined in connection with the specific requirement) in the nonprescribed sample exceeds the acceptance number prescribed for the next larger sample size, the lot fails the requirement.

(d) In the conduct of on-line in-plant inspection, sampling may be performed on a time interval basis. The sampling frequency shall be specified in an applicable grade standard or other procedural instruction approved by the Administrator.

(e) In the event that the lot compliance determination provisions of a standard or specification are based on the number of specified deviations instead of deviants the procedures set forth in this section may be applied by substituting the word "deviation" for the word "deviant" wherever it appears.

(f) Sampling plans referred to in this section are those contained in Tables I, II, III, IV, and V and (g)(1) and (g)(2) of this section which follow or any other plans which are applicable. For processed products not included in these tables, the minimum sample size shall be the exact number of sample units prescribed in the table, container group, and lot size that, as determined by the inspector, most closely resembles the product, type, container, size and amount of product to be sampled. The maximum sample size in tables I, II, III, IV, V, (g)(1), (g)(2) and processed products not included in these tables is 29 sample units.

(g)(1) *Sampling plan for dried figs.* For each 10,000 pounds (or fraction of 10,000 pounds) of product—6 sample units of approximately 35 figs each accumulated into 1 composite (at least 200 figs). Each composite will be examined separately, and all must meet the requirement for the U.S. Grade.

(2) *Sampling plan for dried fruits other than dates and figs.* For each 15,000 pounds (or fraction of 15,000 pounds) of product—sample units of approximately 16 ounces each accumulated into 1 composite (at least 100 ounces) Each composite will be examined separately and all must meet the requirements for the U.S. Grade.

TABLE I—CANNED OR SIMILARLY PROCESSED FRUITS, VEGETABLES, AND PRODUCTS CONTAINING UNITS OF SUCH SIZE AND CHARACTER AS TO BE READILY SEPARABLE

Container size group	Lot size (number of containers) [1]				
Group 1: Any type container of a volume not exceeding that of a No. 303 size can.	3,000 or less	3,001 to 12,000	12,001 to 39,000	39,001 to 84,000	84,001 to 145,000
Group 2: Any type of container of a volume exceeding that of a No. 303 size can but not exceeding that of a No. 3 cylinder size can.	1,500 or less	1,501 to 6,000	6,001 to 19,500	19,501 to 42,000	42,001 to 72,500
Group 3: Any type of container of a volume exceeding that of a No. 3 cylinder size can, but not exceeding that of a No. 12 size can.	750 or less	751 to 3,000	3,001 to 9,750	9,751 to 21,000	21,001 to 36,250
Group 4: Any type of container of a volume exceeding that of a No. 12 size can.	Convert to equivalent number of 6-lb. net weight containers and use group 3				
Lot inspection sample size (no. of sample units) [2]	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) [2]	3	6	6	13	21
Acceptance number	0	1	1	2	3

[1] Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

[2] When a standard sample size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Groups 1, 2, and 3——1 container and its entire contents. Group 4 that approximately 2 pounds of product. When determined by the inspector that a 2-pound sample unit is inadequate, a larger sample unit may be substituted.

TABLE II—FROZEN OR SIMILARLY PROCESSED FRUITS, VEGETABLES, AND PRODUCTS CONTAINING UNITS OF SUCH SIZE AND CHARACTER AS TO BE READILY SEPARABLE

Container size group	Lot size (number of containers) [1]				
Group 1. Any type of container of 1 lb. or less	2,400 or less	2,401 to 9,600	9,601 to 31,200	31,201 to 67,200	67,201 to 116,000
Group 2: Any type of container over 1 lb. but not over 2-½ lbs. net weight.	1,200 or less	1,201 to 4,800	4,801 to 15,600	15,601 to 33,600	33,601 to 58,000
Group 3: Any type of container over 2-½ lbs	Convert to equivalent number of 2-½ lb. containers and use group 2				
Lot inspection sample size (no. of sample units) [2]	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) [2]	3	6	6	13	21
Acceptance number	0	1	1	2	3

[1] Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

[2] When a standard sample unit size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Groups 1 and 2——1 container and its entire contents. Group 3 containers up to 10 lbs.—approximately 3 pounds of product. When determined by the inspector that a 3-pound sample unit is inadequate, a larger

sample unit or 1 or more containers and their entire contents may be substituted for 1 or more sample units of 3 lbs

TABLE III—CANNED, FROZEN, OR OTHERWISE PROCESSED FRUITS, VEGETABLES, RELATED PRODUCTS OF A COMMINUTED, FLUID OR HOMOGENEOUS STATE

Container size group	Lot size (number of containers) [1]				
Group 1: Any type of container of 1 lb. or less	4,500 or less	4,501 to 18,000	18,001 to 56,000	58,501 to 126,000	126,001 to 217,000
Group 2: Any type of container exceeding 1 lb. but not exceeding 60 ounces.	3,000 or less	3,001 to 12,000	12,001 to 39,000	39,001 to 84,000	84,001 to 145,000
Group 3: Any type of container exceeding 60 ounces but not exceeding 10 lbs.	1,500 or less	1,501 to 6,000	6,001 to 19,500	19,501 to 42,000	42,001 to 72,500
Group 4: Any type of container of a volume exceeding 10 lbs	Convert to equivalent number of 6-lb. containers and use group 3				
Lot inspection sample size (no. of sample units) [2]	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) [2]	3	6	6	13	21
Acceptance number	0	1	1	2	3

[1] Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

[2] When a standard sample size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Groups 1, 2, and 3—1 container and its entire contents. A smaller sample unit may be substituted in Group 3 at the inspector's discretion. Group 4—approximately 16 ounces of product. When determined by the inspector that a 16 ounce sample unit is inadequate, a larger sample unit may be substituted.

TABLE IV—DEHYDRATED (LOW-MOISTURE) FRUITS, AND VEGETABLES

Container size group	Lot size (number of containers) [1]				
Group 1: Any type of container of 1 lb. or less	1,800 or less	1,801 to 7,200	7,201 to 23,400	23,401 to 50,400	50,401 to 87,000
Group 2: Any type of container over 1 lb. but not over 6 lbs. net weight.	600 or less	601 to 2,400	2,401 to 7,800	7,801 to 16,800	16,801 to 29,000
Group 3: Any type of container over 6 lbs	Convert to equivalent number of 5 lb. containers and use group 2				
Lot inspection sample size (no. of sample units) [2]	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) [2]	3	6	6	13	21
Acceptance number	0	1	1	2	3

[1] Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

[2] When a standard sample unit size is not specified in the U.S. grade standards, the sample units for the various container size groups are as follows: Group 1—1 container and its entire contents. Groups 2 and 3—1 container and its entire contents or a smaller sample unit when determined by the inspector to be adequate.

TABLE V—DATES

Container size group	Lot size (number of containers) [1]				
Group 1: Any type of container of 1 lb. or less net weight	2,400 or less	2,401 to 9,600	9,601 to 31,200	31,201 to 67,000	67,201 to 116,000
Group 2: Any type of container over 1 lb. but not over 5 lbs. net weight.	800 or less	801 to 3,200	3,201 to 10,400	10,401 to 22,400	22,401 to 33,667
Group 3: Any type of container over 5 lbs	Convert to equivalent number of 5 lb. containers and use group 2				
Lot inspection sample size (no. of sample units) [2]	3	6	13	21	29
Acceptance number	0	1	2	3	4
On-line in-plant inspection sample size (no. of sample units) [2]	3	6	6	13	21

TABLE V—DATES—Continued

Container size group	Lot size (number of containers) [1]				
Acceptance number	0	1	1	2	3

[1] Under on-line in-plant inspection, a 5% overrun in number of containers may be permitted by the inspector before going to the next larger sample size.

[2] Samples consist of 25 ounce sample units, each of which may be a composite of product from a sufficient number of individual containers from 1 case to make up the weight. When previous inspection results from a particular source so indicate, 1 composite sample of 25 ounces of product may be formed from the 3 sample units in the smallest sample size, and 2 composite samples of 25 ounces each may be formed from the 6 sample units in the next to smallest sample size. Sample units in larger sample sizes may not be further composited.

[38 FR 25166, Sept. 12, 1973; 38 FR 26903, Sept. 27, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 20439, June 5, 1986]

§ 52.38a Definitions of terms applicable to statistical sampling.

(a) Terms applicable to both on-line inspection and lot inspection.

(1) *Acceptable Quality Level (AQL).* The maximum percent of defective units of product or the maximum number of defects per hundred units of product which are acceptable as a process average. At the AQL's contained in the statistical sampling plans of this subpart, production has a probability of acceptance ("Pa") of approximately 95 percent.

(2) *Acceptance sampling.* Sampling inspection in which decisions are made to accept or reject product.

(3) *Attributes.* A method of measurement whereby units of product are examined for the presence or absence of specified characteristics in each unit in the sample.

(4) *Defect.* Any nonconformance of a unit of product from specified requirements of a single quality characteristic. Defects are classed as "minor," "major," "severe" or "critical" depending upon the severity and undesirability of the defect.

(5) *Defective.* A unit of product that has one or more defects.

(6) *Inspection by attributes.* Inspection whereby a unit of product is classified as defective or nondefective or the number or defects in the unit of product is counted.

(7) *Standard sample unit size.* A specified amount of product to be used for inspection.

(b) Terms applicable to on-line inspection only.

(1) *Basic inspection period.* A specified period of consecutive production designated for on-line inspection.

(2) *Cumulative Sum Sampling (CuSum) Plan.* An on-line sampling plan that accumulates the number of defects (or defectives), which exceed the sample unit tolerance ("T"), in a series of consecutive samples. Terms specific to the CuSum sampling plan are:

(i) *Acceptance limit ("L").* The maximum accumulation of defects (or defectives) allowed to exceed the sample unit tolerance ("T") in any sample unit or consecutive group of sample units.

(ii) *CuSum value.* The accumulated number of defects (or defectives) that exceed the sample unit tolerance ("T").

(iii) *Sample unit tolerance ("T").* The allowable number of defects (or defectives) in any sample unit.

(iv) *Starting value ("S").* The initial CuSum value used to begin a CuSum sampling plan.

(3) *On-line sampling inspection.* The random selection and subsequent inspection of sample units from a production line.

(4) *Probability of acceptance ("Pa").* The probability that a portion of production, with a given level of quality, will be accepted. In on-line sampling inspection, the probability of acceptance of any portion of production depends on the sample results obtained from the preceding portions. The probability of acceptance values associated with these procedures are the

values which would be expected if a large number of sample units are to be inspected. For the CuSum plans referenced in these procedures, the probability of acceptance at the Acceptable Quality Level (AQL) is approximately 95 percent. The starting value ("S") associated with each CuSum plan helps to make the probability of acceptance of the first portions of production of a basic inspection period as close as possible to 95 percent.

(c) Terms applicable to lot inspection only.

(1) *Acceptance number.* The largest number of defects (or defectives) in the sample that will permit acceptance of the inspection lot.

(2) *Inspection lot.* Any number of containers of the same size and type which contain a processed product of the same type and style, manufactured or processed under essentially the same conditions, offered for inspection and acceptance at one time.

(3) *Probability of acceptance ("Pa").* The probability that an inspection lot, with a given level of quality, will be accepted.

[43 FR 10540, Mar. 14, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.38b Statistical sampling procedures for on-line inspection by attributes of processed fruits and vegetables.

(a) *General.* The Cumulative Sum Sampling Plan, hereinafter referred to as "CuSum," shall be used as the on-line sampling plan for attributes standards under the following conditions.

(1) The producer has designated the intended grade for the basic inspection period prior to the start of production.

(2) Inspection of the product shall be made during the basic inspection period at a point after which all product characteristics, subject to inspection, are fixed and will not be subject to change during final packaging.

(3) A shift to CuSum sampling plans from lot sampling plans during a basic inspection period is not permitted (or vice versa).

(b) *Sampling rate/frequency.* The minimum number of standard sample units to be drawn at random shall be determined by the applicable sampling procedure as approved by the Administrator.

(c) *Determining CuSum values.* At the beginning of the basic inspection period, the CuSum value is set equal to the starting value ("S") for the specified CuSum plan. The CuSum value is then determined for each consecutive sample unit as follows:

(1) Add the number of defects (or defectives) for the present sample unit to the CuSum value of the previous sample unit.

(2) Subtract the sample unit tolerance ("T").

(3) The CuSum value is reset in the following situations. However, determine compliance with the designated grade (see paragraph (d) of this section) prior to resetting the CuSum value:

(i) Reset the CuSum value to zero (0) if the CuSum value is less than zero (0).

(ii) Reset the CuSum value to the acceptance limit ("L") if the CuSum value exceeds the acceptance limit ("L").

(d) *Determining compliance for a designated grade.* (1) A portion of production meets the designated grade if the CuSum value, calculated from the sample unit representing that portion, is equal to or less than the acceptance limit ("L") for all classes of defects.

(2) A portion of production fails the designated grade if the CuSum value, calculated from the sample unit representing that portion, exceeds the acceptance limit ("L") for one or more classes of defects.

(e) *Evaluation of production failing a designated grade.* Production failing a designated grade shall be reevaluated by procedures approved by the USDA.

(f) *Assigning a grade.* (1) All similarly identified (e.g., codes, subcodes, etc.) production will be assigned the same grade.

(2) The grade assigned to similarly identified production will be the lowest grade assigned to any portion of that similarly identified production.

(g) *Redesignation of producer's intended grade.* If the intended grade is redesignated during a basic inspection period, a new CuSum sampling plan shall be instituted for each class of defects (or defectives).

(h) *Cumulative Sum Sampling (CuSum) Plans for processed fruits and vegetables.* (1) Tables VI through X contain the CuSum sampling plans for each of five different standard sample unit sizes. The plans within each table are listed according to increasing values of Acceptable Quality Levels (AQL's).

(2) AQL values of 10.0 or less may be expressed either in "defects per hundred units" or in "percent defective units." The same sampling plans are used for both. Separate sampling plans must be used for AQL values greater than 10.0.

(3) These tables also provide the quality levels associated with 50 percent and 10 percent probabilities of acceptance for each of the plans. These quality levels are expressed in the same units as the corresponding AQL values.

(4) A separate CuSum sampling plan is chosen for each class of defects (or defectives) by first specifying the desired AQL and then selecting the appropriate standard sample unit size. The quality levels associated with 50 percent and 10 percent probabilities of acceptance may be used as guides to help determine a suitable standard sample unit size.

TABLE VI—CUSUM SAMPLING PLANS

[Standard sample unit size = 13]

AQL	S	T	L	Quality levels	
				Pa = 50%	Pa = 10%
Quality levels expressed as defects per 100 units or percent defective					
0.65	0.3	0.1	0.9	5.3	17.7
1.0	.2	.2	.8	5.6	17.7
1.5	0	.5	0.5	7.7	19.2
2.2	.5	.5	1.5	8.2	19.2
4.0	.8	.8	2	9.7	19.6
5.0	0	1	1	14.4	30.2
6.5	1	1	2	14.7	30.2
8.5	1	1.5	2.5	17.4	31.3
10.0	1	1.8	2.6	18.8	32.0
Quality levels expressed as defects per 100 units only					
12.5	1	2	3	23.5	41.4
15.0	1	2.5	3	26.1	42.8
20.0	2	3	4	32.2	52.1
25.0	1	4	3	40.3	62.3
33.0	1	5	4	48.9	72.3

TABLE VI—CUSUM SAMPLING PLANS—Continued

[Standard sample unit size = 13]

AQL	S	T	L	Quality levels	
				Pa = 50%	Pa = 10%
40.0	2	6	5	57.1	82.1
50.0	1	8	4	73.3	101.2
65.0	2	10	5	89.9	120.0
85.0	1	13	5	113.9	147.8
100.0	2	15	6	130.4	165.7
150.0	2	22	7	186.5	227.9
250.0	4	35	11	291.2	340.6
Quality levels expressed as percent defective only					
12.5	1	2	2	22.4	38.4
15.0	1	2.5	2.5	25.0	37.4
20.0	1	3	3	30.7	44.5
25.0	1	4	2	38.1	52.8
33.0	1	5	3	46.2	60.3
40.0	1	6	3	53.8	67.4
50.0	2	7	4	61.5	74.1

TABLE VII—CUSUM SAMPLING PLANS

[Standard sample unit size = 25]

AQL	S	T	L	Quality levels	
				Pa = 50%	Pa = 10%
Quality levels expressed as defects per 100 units or percent defective					
0.4	0.3	0.1	0.9	2.8	9.2
0.65	.2	.2	.8	3.4	9.2
1.0	0	.5	.5	4.0	10.0
1.5	1	.5	2	4.3	10.0
2.5	0	1	1	7.5	15.7
4.0	.5	1.5	2	9.0	18.3
5.0	1.5	1.5	3	9.1	18.3
6.5	1	2	3	12.2	21.5
8.5	0	3	2	16.4	27.1
10.0	1	3	3	16.7	27.1
Quality levels expressed as defects per 100 units only					
12.5	1	4	3	21.0	32.4
15.0	1	5	3	25.2	37.8
20.0	1	6	4	29.7	42.7
25.0	1	8	3	37.7	52.7
33.0	1	10	4	46.5	62.4
40.0	2	12	5	55.1	72.0
50.0	2	14	7	63.9	81.5
65.0	3	18	8	80.7	100.1
85.0	4	23	10	101.8	123.1
100.0	4	27	10	118.3	141.2
Quality levels expressed as percent defective only					
12.5	1	4	3	20.5	28.8
15.0	0	5	2	24.3	34.3
20.0	1	6	3	28.7	38.7
25.0	2	7	4	33.0	43.0
33.0	2	9	5	41.2	51.2
40.0	2	11	5	49.2	58.1
50.0	1	14	3	60.6	70.3

TABLE VIII—CUSUM SAMPLING PLANS

[Standard sample unit size=50]

AQL	S	T	L	Quality levels	
				Pa=50%	Pa=10%
Quality levels expressed as defects per 100 units or percent defective					
0.15	0.3	0.1	0.9	1.4	4.6
0.25	.2	.2	.8	1.5	4.6
0.4	0	.5	.5	2.0	5.0
0.65	.5	.5	1.5	2.1	5.0
1.0	.4	.8	1.6	2.5	5.1
1.5	1	1	2	3.8	7.9
2.5	1.5	1.5	3	4.6	8.1
4.0	1	2.5	3	6.8	11.1
5.0	1	3	3	9.3	13.6
6.5	1	4	3	10.5	16.2
8.5	1	5	4	12.7	18.8
10.0	1	6	4	14.9	21.4
Quality levels expressed as defects per 100 units only					
12.5	1	8	3	18.9	26.3
15.0	1	9	4	21.1	28.8
20.0	2	12	5	27.5	36.0
25.0	2	14	7	31.9	40.7
33.0	3	18	9	40.4	50.0
40.0	3	22	9	48.7	59.3
50.0	4	27	10	59.1	70.6
65.0	4	35	11	75.7	88.5
85.0	5	45	14	96.5	110.7
Quality levels expressed as percent defective only					
12.5	2	7	5	16.8	22.3
15.0	1	9	4	20.9	27.2
20.0	2	11	6	25.2	31.6
25.0	2	14	5	31.2	38.1
33.0	2	18	6	39.4	46.4
40.0	1	22	5	47.3	54.4
50.0	1	27	5	57.2	64.1

TABLE IX—CUSUM SAMPLING PLANS

[Standard sample unit size=100]

AQL	S	T	L	Quality levels	
				Pa=50%	Pa=10%
Quality levels expressed as defects per 100 units or percent defective					
0.1	0.3	0.1	0.9	0.7	2.3
0.15	.2	.2	.8	0.8	2.3
0.25	0	.5	.5	1.0	2.5
0.4	1	.5	2	1.1	2.5
0.65	0	1	1	1.9	3.9
1.0	.5	1.5	2	2.2	4.1
1.5	1	2	2	3.0	5.4
2.5	1	3	3	4.2	6.8
4.0	1	5	3	6.3	9.4
5.0	1	6	4	7.4	10.7
6.5	1	8	4	9.5	13.2
8.5	2	1.0	5	11.7	15.6
10.0	2	1.2	5	13.8	18.0

TABLE IX—CUSUM SAMPLING PLANS—Continued

[Standard sample unit size=100]

AQL	S	T	L	Quality levels	
				Pa=50%	Pa=10%
Quality levels expressed as defects per 100 units only					
12.5	2	14	7	16.0	20.4
15.0	2	17	7	19.1	23.9
20.0	3	22	9	24.4	29.6
25.0	4	27	10	29.6	35.3
33.0	3	36	10	38.8	45.4
40.0	4	43	12	46.1	53.1
50.0	5	53	14	56.4	64.1
Quality levels expressed as percent defective only					
12.5	2	14	6	15.8	19.7
15.0	2	17	6	18.9	23.0
20.0	2	22	7	24.0	28.5
25.0	3	27	8	29.2	33.8
33.0	3	35	9	37.3	42.1
40.0	4	42	10	44.4	49.2
50.0	4	52	10	54.3	59.1

TABLE X—CUSUM SAMPLING PLANS

[Standard sample unit size=200]

AQL	S	T	L	Quality levels	
				Pa=50%	Pa=10%
Quality levels expressed as defects per 100 units or percent defective					
0.04	0.3	0.1	0.9	0.3	1.2
0.065	0.2	0.2	0.8	0.4	1.2
0.1	0	0.5	0.5	0.5	1.3
0.15	0.4	0.8	0.8	0.6	1.3
0.25	0.4	0.8	1.6	0.6	1.3
0.4	1	1	2	1.0	2.0
0.65	1	1.8	2.6	1.2	2.1
1.0	1	2.5	3	1.7	2.8
1.5	1	4	3	2.6	4.1
2.5	1	6	4	3.7	5.3
4.0	1	10	4	5.8	7.8
5.0	2	12	5	6.9	9.0
6.5	2	15	6	8.5	10.8
8.5	3	19	8	10.6	13.1
10.0	3	22	9	12.2	14.8
Quality levels expressed as defects per 100 units only					
12.5	4	27	10	14.8	17.7
15.0	3	33	9	17.8	21.0
20.0	4	43	12	23.1	26.6
25.0	5	53	14	28.2	32.1
33.0	5	70	15	36.9	41.3
40.0	6	84	18	44.1	48.8
50.0	6	105	18	54.8	60.1
Quality levels expressed as percent defective only					
12.5	3	27	9	14.7	17.3
15.0	4	32	10	17.3	20.0
20.0	3	43	9	22.8	25.9
25.0	4	53	11	27.9	31.1

TABLE X—CUSUM SAMPLING PLANS—Continued

[Standard sample unit size = 200]

AQL	S	T	L	Quality levels	
				Pa = 50%	Pa = 10%
33.0	5	69	13	36.1	39.4
40.0	5	83	14	43.1	46.5
50.0	5	103	14	53.1	56.5

[43 FR 10540, Mar. 14, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.38c Statistical sampling procedures for lot inspection of processed fruits and vegetables by attributes.

(a) *General.* Single sampling plans shall be used as the lot sampling plan for attributes standards under either of the following conditions:

(1) Sampling of the product shall be made during the production period. No grade will be assigned to individual sample units. One grade determination only will be made at the end of the production period for the inspection lot.

(2) Sampling of the product shall be made when the inspection lot is located in a warehouse, truck, railroad car, or other similar conveyance.

(b) *Sample size.* Samples shall be randomly selected from each inspection lot in the exact number of sample units indicated for the lot size in tables XI through XIV as applicable for canned, frozen, dried, or dehydrated fruits and vegetables.

TABLE XI—CANNED OR SIMILARLY PROCESSED FRUITS, VEGETABLES, AND PRODUCTS CONTAINING UNITS OF SUCH SIZE AND CHARACTER AS TO BE READILY SEPARABLE

[Lot sample size]

Container size group	Lot size (number of containers)			
Group 1: Any type container of a volume not exceeding that of a No. 303 size can.	12,000 or less	12,001-39,000	39,001-84,000	84,001-145,000
Group 2: Any type of container of a volume exceeding that of a No. 303 size can but not exceeding that of a No. 3 cylinder size can.	6,000 or less	6,001-19,500	19,501-42,000	42,001-72,500
Group 3: Any type of container of a volume exceeding that of a No. 3 cylinder size can, but not exceeding that of a No. 12 size can.	3,000 or less	3,001-9,750	9,751-21,000	21,001-36,250
Group 4: Any type of container of a volume exceeding that of a No. 12 size can.	Convert to equivalent number of 6-lb. net weight containers and use group 3			
Lot inspection: Sample size (number of sample units).	6	13	21	29

TABLE XII—FROZEN OR SIMILARLY PROCESSED FRUITS, VEGETABLES, AND PRODUCTS CONTAINING UNITS OF SUCH SIZE AND CHARACTER AS TO BE READILY SEPARABLE

[Lot sample size]

Container size group	Lot size (number of containers)			
Group 1: Any type of container of 1 lb or less net weight.	9,600 or less	9,601-31,200	31,201-67,200	67,201-116,000
Group 2: Any type of container over 1 lb but not over 2½ lb net weight.	4,800 or less	4,801-15,600	15,601-33,600	33,601-58,000

TABLE XII—FROZEN OR SIMILARLY PROCESSED FRUITS, VEGETABLES, AND PRODUCTS CONTAINING UNITS OF SUCH SIZE AND CHARACTER AS TO BE READILY SEPARABLE—Continued

[Lot sample size]

Container size group	Lot size (number of containers)			
Group 3: Any type of container over 2½ lbs.	Convert to equivalent number of 2½-lb. containers and use group 2			
Lot inspection: Sample size (number of sample units).	6	13	21	29

TABLE XIII—CANNED, FROZEN, OR OTHERWISE PROCESSED FRUITS, VEGETABLES, RELATED PRODUCTS OF A COMMINUTED, FLUID OR HOMOGENEOUS STATE

[Lot sample size]

Container size group	Lot size (number of containers)			
Group 1: Any type of container of 1 lb or less.	18,000 or less	18,001-58,500	58,501-126,000	126,001-217,000
Group 2: Any type of container exceeding 1 lb. but not exceeding 60 oz.	12,000 or less	12,001-39,000	39,001-84,000	84,001-145,000
Group 3: Any type of container exceeding 60 oz but not exceeding 10 lb.	6,000 or less	6,001-19,500	19,501-42,000	42,001-72,500
Group 4: Any type of container exceeding 10 lbs.	Convert to equivalent number of 6-lb. containers and use group 3.			
Lot inspection: Sample size (number of sample units).	6	13	21	29

TABLE XIV—DEHYDRATED (LOW-MOISTURE) FRUITS, AND VEGETABLES

[Lot sample size]

Container size group	Lot size (number of containers)			
Group 1: Any type of container of 1 lb or less net weight.	7,200 or less	7,201-23,400	23,401-50,400	50,401-87,000
Group 2: Any type of container over 1 lb but not over 6 lb net weight.	2,400 or less	2,401-7,800	7,801-16,800	16,801-29,000
Group 3: Any type of container over 6 lbs.	Convert to equivalent number of 5-lb. containers and use group 2.			
Lot inspection: Sample size (number of sample units).	6	13	21	29

(c) *Determining compliance.* (1) An inspection lot meets the requirements of a quality grade if the number of defects (or defectives) is equal to or less than the acceptance numbers of all classes of defects.

(2) An inspection lot fails the requirements of a quality grade if the number of defects (or defectives) exceeds the acceptance number for one or more classes of defects.

(d) *Lot single sampling plans for processed fruits and vegetables.* (1) Tables XV through XIX contain the lot single sampling plans for each of five different standard sample unit sizes. The plans within each table are listed according to increasing values of Acceptable Quality Levels (AQL's).

(2) AQL values of 10.0 or less may be expressed either in "defects per hundred units" or in "percent defective units." The same sampling plans are used for both. Separate sampling plans must be used for AQL values greater than 10.0.

(3) A separate lot single sampling plan is chosen for each class of defects (or defectives) by first specifying the desired AQL, the appropriate standard sample unit size, and the number of sample units as specified in § 52.38c (b) of this subpart. The quality levels associated with the Pa=50% and Pa=10% levels are given in the instructional manual.

TABLE XV—LOT SINGLE SAMPLING PLANS

[Standard sample unit size=6]

	Number of sample units			
	6	13	21	29
Acceptance numbers—quality levels expressed as defects per 100 units or percent defective—AQL				
1.0	1	2	3	4
1.5	1	3	4	5
2.5	3	4	6	8
4.0	4	6	9	11
5.0	4	7	11	14
6.5	5	9	13	17
8.5	6	11	16	21
10.0	7	12	19	24
Quality levels expressed as defects per 100 units only				
12.5	8	15	22	29
15.0	9	17	26	35
20.0	12	22	33	44
25.0	14	27	41	54
33.0	18	34	52	70
40.0	21	40	62	83
50.0	25	49	76	102
65.0	31	62	97	131
85.0	40	80	124	168
100.0	46	92	144	196
150.0	66	135	212	286
250.0	105	218	344	469
Quality levels expressed as percent defective only				
12.5	8	15	22	29
15.0	9	17	25	34
20.0	11	21	33	43
25.0	13	26	39	53
33.0	16	32	50	67
40.0	19	38	59	80
50.0	23	46	72	98

TABLE XVI—LOT SINGLE SAMPLING PLANS

[Standard sample unit size=13]

	Number of sample units			
	6	13	21	29
Acceptance numbers—quality levels expressed as defects per 100 units or percent defective—AQL				
0.65	1	3	4	5
1.0	2	4	6	7
1.5	3	5	8	10
2.5	4	8	11	15
4.0	6	11	16	22
5.0	7	13	20	28
6.5	9	17	25	33
8.5	11	21	31	41
10.0	12	24	36	48
Quality levels expressed as defects per 100 units only				
12.5	15	29	44	58
15.0	17	34	51	69
20.0	22	43	67	90
25.0	27	53	82	110
33.0	34	68	106	143
40.0	40	81	126	171
50.0	49	99	156	211
65.0	62	127	199	271
85.0	80	163	257	350
100.0	92	190	300	408
Quality levels expressed as percent defective only				
12.5	15	28	43	58
15.0	17	33	51	68
20.0	21	42	65	88
25.0	26	51	80	108
33.0	32	66	103	138
40.0	38	78	123	166
50.0	46	95	150	204

TABLE XVII—LOT SINGLE SAMPLING PLANS

[Standard sample unit size=25]

	Number of sample units			
	6	13	21	29
Acceptance numbers—quality levels expressed as defects per 100 units or percent defective—AQL				
0.4	2	3	5	6
0.65	3	5	7	8
1.0	4	6	9	12
1.5	5	9	13	16
2.5	7	13	19	25
4.0	10	19	29	38
5.0	12	23	35	46
6.5	15	29	44	58
8.5	19	36	56	74
10.0	21	42	64	86
Quality levels expressed as defects per 100 units only				
12.5	26	51	79	106
15.0	30	60	93	128
20.0	39	78	122	165
25.0	48	96	150	203
33.0	61	124	195	265
40.0	73	149	234	318

TABLE XVII—LOT SINGLE SAMPLING PLANS—Continued

[Standard sample unit size = 25]

	Number of sample units			
	6	13	21	29
50.0	89	183	289	394
65.0	114	235	372	507
Quality levels expressed as percent defective only				
12.5	25	50	78	105
15.0	30	59	92	125
20.0	38	77	120	163
25.0	46	94	148	200
33.0	59	121	191	260
40.0	70	145	228	312
50.0	85	177	281	385

TABLE XVIII—LOT SINGLE SAMPLING PLANS

[Standard sample unit size = 50]

	Number of sample units			
	6	13	21	29
Acceptance numbers—quality levels expressed as defects per 100 units or percent defective—AQL				
0.15	1	3	4	5
0.25	2	4	5	7
0.4	3	5	8	10
0.65	4	8	11	15
1.0	6	11	16	21
1.5	8	15	22	29
2.5	12	23	35	46
4.0	18	34	53	70
5.0	21	42	64	86
6.5	27	53	82	110
8.5	34	67	105	142
10.0	39	78	122	165
Quality levels expressed as defects per 100 units only				
12.5	48	96	150	203
15.0	56	114	178	242
20.0	73	149	234	318
25.0	89	183	289	394
33.0	115	239	377	514
40.0	138	287	454	620
50.0	170	355	563	769
Quality levels expressed as percent defective only				
12.5	47	95	149	202
15.0	55	112	177	240
20.0	71	147	231	315
25.0	87	181	286	390
33.0	112	234	372	508
40.0	134	281	446	611
50.0	164	348	552	756

TABLE XIX—LOT SINGLE SAMPLING PLANS

[Standard sample unit size = 100]

	Number of sample units			
	6	13	21	29
Acceptance numbers—quality levels expressed as defects per 100 units or percent defective—AQL				
0.1	2	3	5	6
0.15	3	4	6	8
0.25	4	6	9	12
0.4	5	9	13	17
0.65	7	13	20	26
1.0	10	19	29	38
1.5	14	27	41	54
2.5	21	42	64	86
4.0	32	64	99	134
5.0	39	78	122	165
6.5	49	99	156	211
8.5	63	128	200	272
10.0	73	149	234	318
12.5	89	183	289	394
15.0	105	218	344	469
20.0	138	287	454	620
25.0	170	355	563	769
33.0	221	463	736	1,008
40.0	266	558	888	1,216
50.0	329	692	1,103	1,513
Quality levels expressed as percent defective only				
12.5	88	182	287	392
15.0	104	216	342	467
20.0	136	284	450	615
25.0	167	351	558	763
33.0	217	457	728	999
40.0	260	549	877	1,203
50.0	320	680	1,088	1,494

[43 FR 10542, Mar. 14, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.39 Issuance of certificate of sampling.

Each inspector and each licensed sampler shall prepare and sign a certificate of sampling to cover the samples drawn by the respective person, except that in-plant inspectors who inspect the samples which they have drawn need not prepare a certificate of sampling. One copy of each certificate of sampling prepared shall be retained by the licensed sampler and the original and all other copies thereof shall be disposed of in accordance with the instructions of the Administrator.

[51 FR 20445, June 5, 1986]

§ 52.40 Identification of lots sampled.

Each lot from which officially drawn samples are selected shall be marked in such manner as may be prescribed by the Administrator, if such lots do not otherwise possess suitable identification.

Fees and Charges

§ 52.41 Payment of fees and charges.

Fees and charges for any inspection service shall be paid by the interested party making the application for such service, in accordance with the applicable provisions of the regulations in this part, and if so required by the inspection service, an advance of funds prior to rendering inspection service in an amount suitable to the Administrator, or a surety bond suitable to the Administrator, shall be required as a guarantee of payment for the services rendered. All fees and charges for any inspection service performed pursuant to the regulations in this part shall be paid by check, draft, or money order payable to the United States Department of Agriculture. Remittance shall be sent to the address specified on the bill for collection on or before the due date to avoid a late payment charge.

[51 FR 20445, June 5, 1986]

§ 52.42 Schedule of fees.

Unless otherwise provided in a written agreement between the applicant and the Administrator, the fee for any inspection service performed under the regulations is this part, shall be at the rate of $31.00 per hour plus an additional $7.00 per hour for all scheduled overtime hours. When work is performed on a holiday, an additional hour shall be charged at the regular hourly rate for each hour worked.

[54 FR 50732, Dec. 11, 1989]

§ 52.43 Fees to be charged and collected for sampling when performed by a licensed sampler.

Such sampling fees as are specifically prescribed by the Administrator in connection with licensing of the particular sampler will be assessed and collected from the applicant by the office of inspection serving the area where services are performed. *Provided*, that if the employee is an employee of a state, the appropriate authority of the state may make the collection.

[48 FR 12326, Mar. 24, 1983]

§ 52.44 Inspection fees when charges for sampling have been collected.

For any lot of processed products from which a sample in drawn by a licensed sampler and the applicable sampling fee is collected, as provided in § 52.43, the fees for the other inspection services with respect to such lot shall not include charges for sampling.

[48 FR 12326, Mar. 24, 1983]

§ 52.45 Inspection fees when charges for sampling have not been collected.

For any lot of processed products from which a sample is drawn by a licensed sampler and the sampling fee is not collected by the appropriate authority as provided in § 52.43, the fees and charges for inspection services with respect to such lot shall be the applicable fees and charges prescribed in § 52.42.

[48 FR 12326, Mar. 24, 1983]

§ 52.46 Fee for appeal inspection.

The fee to be charged for an appeal inspection shall be at the rates prescribed in this part for other inspection services: *Provided*, That, if the result of any appeal inspection made for any applicant other than the United States or any agency or instrumentality thereof, discloses that a material error was made in the inspection on which the appeal is made, no inspection fee shall be assessed.

§ 52.47 Fees to be charged for microbiological, chemical and certain other special analyses.

(a) Unless otherwise provided in paragraph (b) of this section, fees charged for micro, chemical and certain other special analyses made at the request of the applicant, or because of additional specification requirements, and other applicable services, shall be at the rate of $25.00 per hour. Other applicable services include, but are not restricted to, grading unofficial samples, providing copies of score sheets and additional copies of certificates.

(b) Fees charged for microbiological, chemical and certain other special laboratory analyses performed by Commodities Scientific Support Division on citrus juice and certain other citrus products, requested by the applicant, or because of additional specification requirements and other applicable services, shall be at the rate of $29 per hour. Other applicable services include, but are not restricted to, analyzing unofficial samples, and providing original and additional copies of certificates.

[55 FR 48102, Nov. 19, 1990]

§ 52.48 Charges for plant survey and inspection.

(a) The fees to be charged for a plant survey and inspection shall be at the rates prescribed in §§ 52.42 and 52.51.

(b) Fees charged for a plant survey and a sanitation inspection under § 52.42 of this part will be credited back to plants entering into an inplant inspection contract with AMS within 60 days of the survey.

[38 FR 25168, Sept. 12, 1973. Redesignated at 42 FR 32514, June, 27, 1977 and at 46 FR 63203, Dec. 31, 1981; 51 FR 20445, June 5, 1986]

§ 52.49 Charges for copies of inspection documents and/or inspection data.

If the applicant for inspection service requests additional copies of inspection documents and/or inspection data referable to the processed product covered thereby, the applicant may obtain such copies from the supervisor in the office of inspection serving the area where the service was performed at a charge of ½ hour per copy in accordance with the rate in § 52.42: Provided, that no charge shall be made for one copy if requested at the time of the original request for inspection. Inspection certificates issued in accordance with § 52.21 may be supplied to any financially interested party at a charge of ½ hour per certificate for each seven (7), or fewer copies in accordance with the rate in § 52.42.

[54 FR 50732, Dec. 11, 1989]

§ 52.50 Travel and other expenses.

Charges may be made to cover the cost of travel time incurred in connection with the performance of any inspection service, including appeal inspections, at the rate of $31.00 per hour. This includes time spent waiting for transportation as well as time spent traveling, but not to exceed eight hours of travel time for any one person for any one day: And provided further, that if travel is by common carrier, no hourly charge may be made for travel time outside the employee's official work hours.

[54 FR 50732, Dec. 11, 1989]

§ 52.51 Charges for inspection services on a contract basis.

(a) Irrespective of fees and charges prescribed in foregoing sections, or in this section, the Administrator may enter into contracts with applicants to perform continuous inspection services or other types of inspection services pursuant to the regulations in this part and other requirements as prescribed by the Administrator in such contract, and the charges for such inspection service provided in such contracts shall be on such basis as will reimburse the Agricultural Marketing Service of the Department for the full cost of rendering such inspection service including an appropriate overhead charge to cover as nearly as practicable administrative overhead expenses as may be determined by the Administrator.

(b) Irrespective of fees and charges prescribed in the foregoing sections, or in this section, the Administrator may enter into a written memorandum of understanding or contract, whichever may be appropriate, with any administrative agency charged with the administration of a marketing agreement or a marketing order effective pursuant to the Agricultural Marketing Agreement Act of 1937, as amended (7 U.S.C. 601 et seq.) for the making of inspections pursuant to said agreement or order on such basis as will reimburse the Agricultural Marketing Service of the Department for the full cost of rendering such inspection service including an appropriate overhead charge to cover as nearly as practicable administrative overhead expenses as may be determined by the Administrator. Likewise, the Administrator may enter into a written memorandum of understanding or contract, whichever may be appropriate, with an administrative agency charged with an administration of a similar program operated pursuant to the laws of any State.

(c) Charges for year-round in-plant inspection services on a contract basis will be billed to the applicant monthly for all hours worked with a minimum of 40 hours per week for each inspector assigned to perform the inspection services in accordance with the following schedule:

(1) For personnel assigned on a year-round basis:

Each inspector—$25.00 per hour.

(2) For personnel assigned on less than a year-round basis:

Each inspector—$28.00 per hour.
In-plant sampler—$14.00 per hour.

(3) Holiday pay. An eight (8) hour charge will be made for each inspector assigned at their regular hourly rate. When work is performed, an additional hour at the regular hourly rate will be charged for each hour worked.

(4) Night differential. A 10 percent night differential charge will be made for all work performed between the hours of 6 p.m. and 6 a.m.

(5) Overtime. All overtime hours will be charged at the regular rates specified in paragraphs (c)(1) and (2) of this section plus $7.00 per hour.

(d) Charges for less than year-round in-plant inspection services (four or more consecutive 40 hour weeks) on a contract basis will be billed to the applicant monthly for all hours with a minimum of 40 hours for each inspector assigned to perform the inspection services in accordance with the following schedule: [1]

(1) Each inspector—$28.00 per hour.[1]
(2) In-plant sampler—$14.00 per hour.

(3) Holiday pay. An eight (8) hour charge will be made for each inspector assigned at their regular hourly rate. When work is performed, an additional hour at the regular hourly rate will be charged for each hour worked.

(4) Night differential. A 10 percent night differential will be charged for all work performed between the hours of 6 p.m. and 6 a.m.

(5) Overtime. All overtime hours will be charged at the regular rates specified in paragraph (d)(1) of this section plus $7.00 per hour.

(e) No Member of, or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of any contract provided for in this section or to any benefit that may arise therefrom, but this provision shall not be construed to extend to such contract if made with a corporation for its general benefit, and shall not extend to any benefits that may accrue from the contract to a Member of, or Delegate to Congress, or a Resident Commissioner in his capacity as a farmer.

[38 FR 25168, Sept. 12, 1973, as amended at 40 FR 47753, Oct. 10, 1975. Redesignated at 42 FR 32514, June 27, 1977 and amended at 42 FR 45327, Sept. 9, 1977; 43 FR 46291, Oct. 6, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981 and amended at 47 FR 20108, May 11, 1982; 51 FR 20445, June 5, 1986. Redesignated and amended at 54 FR 50732, Dec. 11, 1989]

MISCELLANEOUS

§ 52.53 Approved identification.

(a) *General.* Use of the approved identification marks described and illustrated in Figures 1 through 10 of this section is restricted to processed products that:

(1) Are clean, safe, and wholesome;

(2) Have been produced or packed in an approved plant.

(3) Are truthfully and accurately labeled.

(4) When graded against a U.S. grade standard, meet the quality requirements for U.S Grade C or better;

(5) Meet applicable fill weight and/or drained weight, Brix or other characteristics of a commodity related to market value;

(6) Have been certified, or have been inspected and are eligible for certification, by an inspector; and, in addition, meet the specific requirements stated in (b), (c), and (d) of this section.

---

[1] Except a minimum of 8 hours per day will be billed for intermittent type in plant services in lieu of a minimum of 40 hours a week. Assignments in-plant for less than four weeks will be billed in accordance with § 52.42.

(7) Labels and advertising material containing or referring to approved identification must be approved by USDA inspection service prior to use.

(b) *Inspection (Continuous) grade and inspection marks.* The official marks approved for use by plants operating under USDA continuous inspection service contracts shall be similar in form and design to the examples in Figures 1 through 10 of this section: *Provided,* That the official marks illustrated by figures 8 and 9 are limited to products packed by plants operating under an approved Quality Assurance type of inspection contract: *And provided further,* That the inspection marks illustrated in figures 1 through 4 may only be used on products packed by plants operating under USDA continuous inspection.

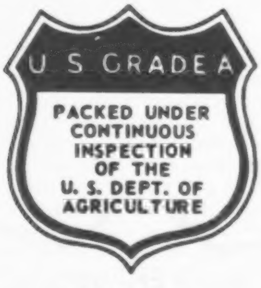

U. S. GRADE A
PACKED UNDER
CONTINUOUS
INSPECTION
OF THE
U. S. DEPT. OF
AGRICULTURE

FIGURE 1.

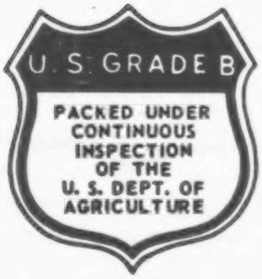
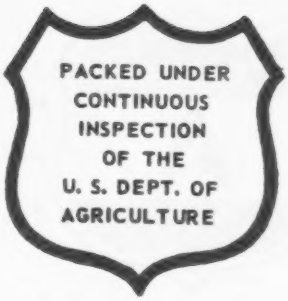

U. S. GRADE B
PACKED UNDER
CONTINUOUS
INSPECTION
OF THE
U. S. DEPT. OF
AGRICULTURE

FIGURE 2.



Statement enclosed within a shield.

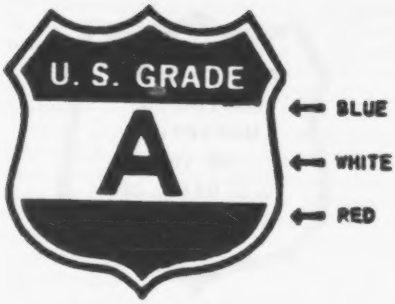
FIGURE 3.

PACKED UNDER
CONTINUOUS
INSPECTION
OF THE
U. S. DEPT. OF
AGRICULTURE

Statement without the use of the shield.

FIGURE 4.

(c) *In-plant inspection (other than continuous) grade and inspection marks.* The official marks approved for use by plants operating under USDA inspection service contracts (other than continuous) requiring a resident inspector shall be limited to those similar in form and design to the examples in Figures 5 through 14 of this section; Provided: That the official marks illustrated by Figures 9 and 10 are limited to products packed by plants operating under an approved Quality Assurance type of an inspection contract.


U. S. GRADE
A
BLUE
WHITE
RED

Shield using red, white, and blue background or other colors appropriate for Label.

FIGURE 5

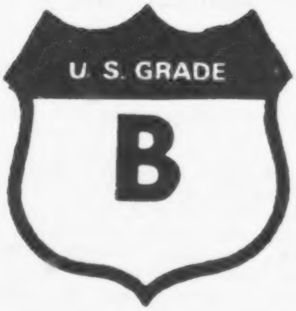
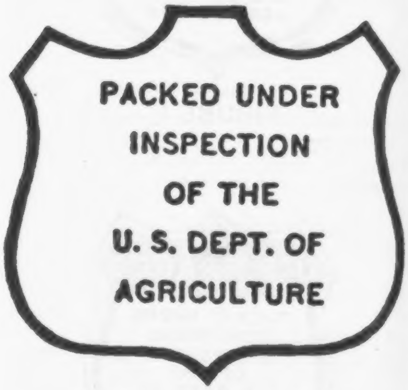


FIGURE 6

PACKED UNDER
INSPECTION
OF THE
U. S. DEPT. OF
AGRICULTURE

Statement without the use of the shield.

FIGURE 7


PACKED UNDER
INSPECTION
OF THE
U. S. DEPT. OF
AGRICULTURE

Statement enclosed within a shield.

FIGURE 8

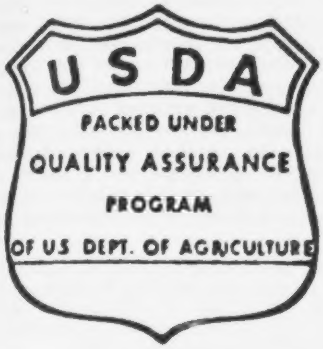


FIGURE 9

**PACKED UNDER
QUALITY ASSURANCE
PROGRAM
of the
U.S. DEPT. OF AGRICULTURE**

Statement without the use of the shield.

FIGURE 10

(d) *"Approved plant-lot inspection" grade and inspection marks.* Processed products that are produced in an approved plant as defined in § 52.2 and inspected and certified by an inspector on a lot basis may be labeled with an official mark as defined in § 52.3 when adequate control and use is approved. The use of official marks for this type of service is restricted to grade marks (with or without plain shield) and/or the statement "Inspected by the U.S. Department of Agriculture" (with or without plain shield). The official marks shall be similar in form and design as illustrated in figures 11 through 14. Failure to have all lots bearing official marks either inspected and certified or certified as produced in an approved plant shall cause the debarment of the user from receiving subsequent services, and such other actions as provided for in the Agricultural Marketing Act of 1946.

(e) *Sampling marks.* Processed products which have been sampled for inspection as provided in this part may, at the option of the Department, be identified by an authorized representative of the Department. The products are identified by stamping the container(s) comprising such lot(s), witn an official "sampling mark", similar in form and design to the example in figure 15 of this section. The "sampling marks" will identify products officially sampled by a particular field office. Such mark will include a code identifying the field office performing the sampling.

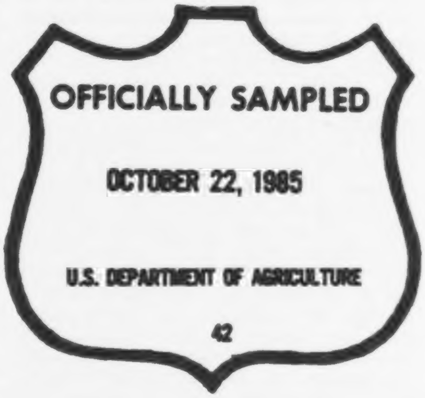


FIGURE 15

(f) *Removal of labels bearing approved grade or inspection marks.* (1) At the time a lot of processed products bearing approved grade or inspection marks is found to be mislabeled, the processor shall separate and retain such lot for relabeling. Removal and replacement of labels shall be done, under the supervision of a USDA inspector, within the time specified by the Administrator or as may be mutually agreed by the processor and the Administrator.

(2) The processor shall be held accountable to the Department for all mislabeled products until the products have been properly labeled.

(3) Clearance for the release of the relabeled product shall be obtained, by the processor, from the inspector.

(g) *Licensing and identification of certain official devices.* The Administrator may issue licenses permitting the manufacture, identification, and sale of any official device designated as a USDA color standard, defect guide or other similar aid under such terms and conditions as may be specified by the Administrator. Licenses shall be available to all persons meeting conditions prescribed by the Administrator, shall be nonexclusive, and shall be recoverable for cause. No person shall manufacture, identify, distribute or sell any such official device except at the direction of or under license from the Administrator. Such official devices may be marked, tagged or otherwise designated with the prefix "USDA" together with other identifying words or symbols, as prescribed by the license.

(h) *Prohibited uses of approved identification.* Except as specified in this section, no label or advertising material used upon, or in conjunction, with a processed product, as defined by these Regulations, shall bear a brand name, trademark, product name, company name, or any other descriptive material that incorporates, resembles, simulates, or alludes to, any official U.S. Department of Agriculture certificate of quality or loading, grade mark, grade statement (except honey and maple syrup which may bear such grade mark or statement), continuous inspection mark, continuous inspection statement, sampling mark or sampling statement, or combinations of one or more thereof.

(i) *Disposition of labels bearing approved grade or inspection marks when a contract is cancelled.* Upon cancellation of a contract, labels bearing approved grade or inspection marks shall remain under the control of the inspection service. The inspection service will approve disposition of said labels for destruction, sale or transfer to another approved plant, remove or obliterate the grade or inspection mark, or other action as may be agreed upon by all interested parties.

[38 FR 25169, Sept. 12, 1973, as amended at 40 FR 48934, Oct. 20, 1975. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981; 48 FR 12326, Mar. 24, 1983; 51 FR 20446, June 5, 1986]

§ 52.54 Debarment of service.

(a) The following acts or practices, or the causing thereof, may be deemed sufficient cause for the debarment, by the Administrator, of any person, including any agents, officers, subsidiaries, or affiliates of such person, from any or all benefits of the Act for a specified period. The rules of practice governing withdrawal of inspection and grading services set forth in 7 CFR Part 50 shall be applicable to such debarment action.

(1) *Fraud or misrepresentation.* Any misrepresentation or deceptive or fraudulent practice or act found to be made or committed in connection with:

(i) The making or filing of an application for any inspection service;

(ii) The submission of samples for inspection;

(iii) The use of any inspection report or any inspection certificate, or appeal inspection certificate issued under the regulations in this part;

(iv) The use of the words "Packed under continuous inspection of the U.S. Department of Agriculture," any legend signifying that the product has been officially inspected, any statement of grade or words of similar import in the labeling or advertising of any processed product;

(v) The use of a facsimile form which simulates in whole or in part any official U.S. certificate for the purpose of purporting to evidence the U.S. grade of any processed product.

(2) *Wilful violation of the regulations in this subpart.* Wilful violation of the provisions of this part of the Act.

(3) *Interfering with an inspector, inspector's aid, or licensed sampler.* Any interference with, obstruction of, or attempted interference with, or attempted obstruction of any inspector, inspector's aide, or licensed sampler in the performance of his duties by intimidation, threat, assault, bribery, or any other means—real or imagined.

[38 FR 25170, Sept. 12, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.55 Political activity.

All inspectors and licensed samplers are forbidden, during the period of their respective appointments or licenses, to take an active part in political management or in political campaigns. Political activities in city, county, State, or national elections, whether primary or regular, or in behalf of any party or candidate, or any measure to be voted upon, are prohibited. This applies to all appointees or licensees, including, but not limited to, temporary and cooperative employees and employees on leave of absence with or without pay. Wilful violation of this section will constitute grounds for dismissal in the case of appointees and revocation of licenses in the case of licensees.

§ 52.56 Purchase of commodity samples for review.

Employees are authorized to purchase commodity samples for review. Employees must pay and obtain receipts for such purchases and keep receipts subject to inspection by supervisory or other authorized Department employees.

[48 FR 12330, Mar. 24, 1983]

§ 52.57 Compliance with other laws.

None of the requirements in the regulations in this part shall excuse failure to comply with any Federal, State, county, or municipal laws applicable to the operation of food processing establishments and to processed food products.

§ 52.58 Identification.

Each inspector and licensed sampler shall have in his possession at all times and present upon request, while on duty, the means of identification furnished by the Department to such person.

§ 52.59 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

The information collection requirements contained in this part have been approved by the Office of Management and Budget (OMB) under the provisions of 44 U.S.C. Chapter 35 and have been assigned OMB control no. 0581-0123.

(44 U.S.C. Ch. 35)

[49 FR 23826, June 8, 1984]

Requirements for Plants To Be Approved and for Plants Using Contract In-Plant Inspection Services [1]

Source: Sections 52.81 to 52.83 appear at 38 FR 25170, Sept. 12, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.81 Plant survey.

Prior to a plant being approved, or the inauguration of in-plant inspection services, and at such intervals as may be deemed necessary or appropriate, the Administrator will make, or cause to be made, a survey and inspection of the plant where such inspection services are to be performed to determine whether the plant and methods of operation are suitable and adequate for the performance of such service in accordance with:

(a) The regulations in this part, including, but not limited to, the requirements contained in §§ 52.81 through 52.83; and

(b) The terms and provisions of any contract pursuant to which the service is to be performed: *Provided,* That, such survey(s) shall be repeated at least yearly.

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[1] Compliance with the above requirements does not excuse failure to comply with all applicable sanitary rules and regulations of city, county, State, Federal, or other agencies having jurisdiction over such plants and operations.

§ 52.82 Basis of survey and plant inspection.

The plant survey and inspection will be based on the Regulations issued under the Federal Food, Drug, and Cosmetic Act—Human Foods; Good Manufacturing Practice (Sanitation) in Manufacture, Processing, Packing, or Holding (21 CFR Part 110)—as may be modified or augmented by the Federal Food and Drug Administration, U.S. Department of Health, Education, and Welfare or the Administrator of the Agricultural Marketing Service.

§ 52.83 Reporting results of the plant survey and inauguration of inspection services.

(a) Results of the plant survey shall be reported in writing to a designated plant official.

(b) When the plant meets the requirements for the survey, inspection services may be inaugurated at a time mutually satisfactory to the plant management and USDA.

(c) When the plant fails the requirements of the survey, contract services shall be withheld until corrective action is completed to the satisfaction of the USDA.

Subpart—United States Standards for Inspection by Variables

SOURCE: 38 FR 10447, Apr. 27, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PURPOSE, OPTIONS, REQUIREMENTS

§ 52.201 Purpose.

The purpose of these standards is to:

(a) Designate and define symbols and terminology associated with statistical quality control;

(b) Prescribe a procedure for collecting and recording data that is adaptable to use for statistical quality control; and

(c) Provide a statistical procedure for determining compliance of a variable, which may be any measurable product characteristic, with a specified requirement.

§ 52.202 Options.

These standards provide for three options, any one of which may be applied to determine compliance of a variable. These options are based on procedures employing the use of:

(a) Conventional averages;

(b) The median; or

(c) Moving averages.

§ 52.203 Requirements for application.

These standards are written in general terms to be applied to any variable. Therefore, in order to use these standards it will be necessary to predetermine:

(a) The sampling allowance code;

(b) The sampling frequency;

(c) The values for:

(1) Specified averages;

(2) Warning limits;

(3) Reject limits; and

(4) Maximum range, when requested.

DEFINITIONS

§ 52.204 Definitions.

Statistical and inspection symbols and terms and their respective definitions which are pertinent to the understanding and application of these standards follow.

(a) *Symbols defined.*

LRL—The lower reject limit for individual measurements. The lowest value an individual measurement may have without causing the production to be rejected for failure to meet prescribed requirements for individual measurements.

LRL$_{\bar{x}}$—The lower reject limit for subgroup averages or medians. The lowest value the average or median of a subgroup may have without causing the production to be rejected for failure to meet prescribed requirements for subgroup averages.

LWL—The lower warning limit for individual measurements. This value serves as a warning point that the production may have reached a level where the chances of subsequently finding an individual measurement that will fall below the LRL have increased to a degree that the production may be in danger of rejection.

$LWL_{\bar{x}}$—The lower warning limit for subgroup averages or medians. This value serves as a warning point that the quality of the production may have reached a level where the chances of subsequently finding a subgroup average or median that will fall below LRL_{x} have increased to a degree that the production may be in danger of rejection.

m—The number of subgroups in a sample.

$\bar{M}$i—The median of all the individual measurements in a subgroup.

Mi—The median of all the individual measurements or subgroup medians (Mi) in a sample.

n—The total number of sample units or measurements in a sample. $n=(m)(n_s)$.

n_s—The number of sample units or measurements in a subgroup.

R—A range of measurements, the difference between the highest measurement and lowest measurement within a subgroup.

$\bar{R}$—The average range of all the subgroup ranges.

$\bar{R}'$—A specified average range value.

R_{max}—A specified maximum range for a subgroup.

s—The standard deviation of the individual measurements.

sx—The standard deviation of the averages.

URL—The upper reject limit for individual measurements. The highest value an individual measurement may have without causing the production to be rejected for failure to meet prescribed requirements for individual measurements.

$URL_{\bar{x}}$—The upper reject limit for subgroup averages or medians. The highest value the average or median of a subgroup may have without causing the production to be rejected for failure to meet prescribed requirements for subgroup averages.

UWL—The upper warning limit for individual measurements. This value serves as a warning point that the quality of the production may have reached a level where the chances of subsequently finding an individual measurement that will exceed the URL have increased to a degree that the production may be in danger of rejection.

$UWL_{\bar{x}}$—The upper warning limit for subgroup averages or medians. This value serves as a warning point that the quality of production may have reached a level where the chances of subsequently finding a subgroup average or median that will exceed the $URL_{\bar{x}}$—have increased to a degree that the production may be in danger of rejection.

X—The value of an individual measurement for a variable.

$\bar{X}$—The average of all individual measurements in a subgroup.

$\bar{\bar{X}}'_{max}$—A specified maximum lot average value.

$\bar{\bar{X}}'_{max}$ adjusted—$\bar{\bar{X}}'_{max}$ plus a sampling allowance.

$\bar{\bar{X}}'_{min}$—A specified minimum lot average value.

$\bar{\bar{X}}'_{min}$ adjusted $\bar{\bar{X}}'_{min}$ minus a sampling allowance.

$\bar{\bar{X}}$—The arithmetic mean of all the individual measurements in a sample. When the average is calculated for each subgroup in a sample for conventional averages, $\bar{\bar{X}}$ is also the average of the subgroup averages.

(b) *Terms defined.*

Average. The arithmetic mean of two or more values; the sum of all measurements divided by the number of measurements.

Median. The median is the middle value with respect to magnitude of all the individual measurements when the number of individual measurements is odd. When the number of individual measurements is even and arranged according to magnitude, the median is the arithmetic mean of the two middle values.

Moving average. A scheme under which a series of consecutive measurements are made until such number equals the subgroup size; the average is then determined and recorded; as new data is collected from continuing production, the first measurement of the subgroup is dropped, the next new value is added, and a new average is calculated; this process of adding new measurements, dropping the oldest measurement in the subgroup, and calculating the average on the new data is continued throughout the production.

Example:

$$\bar{X}_1 = (5+7+3)/3 = 5.00$$
$$\bar{X}_2 = (7+3+4)/3 = 4.67$$
$$\bar{X}_3 = (3+4+6)/3 = 4.33$$

Moving range. The difference between the highest measurement and lowest measurement within a subgroup from which a moving average is obtained.

One-sided specification. A specification with rejection limits applicable to only one side of the specified lot average. When only lower reject limits apply, the term "low-sided specification" may be used. When only upper reject limits apply, the term "high-sided specification" may be used.

Two-sided specification. A specification with both upper and lower rejection limits applicable.

Sample. Any number of sample units to be used for inspection of a lot.

Sample unit. A container, the entire contents of a container, a portion of the contents of a container, a composite mixture of a product, or any other unit of container or commodity to be used for inspection.

Sampling allowance. The amount that the sample quality may deviate from the lot quality due solely to the fact that only a portion has been taken from the whole lot.

Subgroup. Generally a small group of sample units representing a portion of a sample. The term "subgroup" is synonymous with the term "sample" when the sample contains only one subgroup.

Variable. Any measurable product characteristic.

[38 FR 10447, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

RECORDS

§ 52.205 Records.

(a) *General.* Records required for use in the implementation of these standards consist of a data sheet, referred to as an "$\bar{X}$ and R data sheet," on which numerical values are recorded, and/or a control chart on which certain numerical values are recorded in the form of plottings. It is desirable to use both forms. The control chart may be incorporated on the same sheet with the $\bar{X}$ and R data sheet. However, one of these forms may be used in lieu of both as desired at the option of the packer.

(b) *$\bar{X}$ and R data sheets.* A separate data sheet shall be maintained for each item. When a single item is simultaneously produced on more than one processing line, it is desirable to maintain one data sheet for the item. In such instances, the processing line designation shall be recorded with the corresponding data.

The $\bar{X}$ and R data sheets shall provide for recording the following information:

(1) The time a sample unit or subgroup has been drawn;

(2) The X values;

(3) The total values of all the X values in the subgroups when conventional averages are used;

(4) The values for $\overline{Mi}$, R, $\bar{R}$, Mi, $\bar{\bar{X}}$, and $\bar{X}$.

(c) *$\bar{X}$ and R control charts.* Control charts consist of an $\bar{X}$ chart and may consist of an R chart. When both are used they are contained on the same sheet with the limits for the $\bar{X}$ chart on the top portion and the limits for the R chart on the lower portion with a space separating the two such that plottings from one does not overlap those of the other.

Separate control charts shall be maintained for each item. More than one day's production of an item may be plotted on a single control chart.

(1) *$\bar{X}$ charts.* (i) The $\bar{X}$ charts for two-sided specifications shall consist of lines and values properly representing both the upper and lower reject and warning limit(s), and may require the use of minimum and maximum specification lot averages.

(ii) The $\bar{X}$ chart for one-sided specifications shall consist of lines and values properly representing, as applicable, the upper or lower reject and warning limit(s), and the minimum or maximum specification lot average.

(2) *R charts.* When the R chart is used, it shall consist of lines and values properly representing $\bar{R}'$, R_{max}, and the lower limit for R. For subgroup sizes of 6 or less the value of the lower limit for R will always be zero.

[38 FR 10447, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

PROCEDURE

§ 52.206 Sampling.

(a) *General.* In order to obtain the most reliable results, sampling should be performed at a point where no further change in the variable can occur. Sample units or subgroups shall be drawn separately for each code, container size, and style.

(b) *Subgroup sampling.* Sampling by subgroups consists of drawing more than one sample unit at approximately the same time. This type of sampling is required in the use of the conventional $\bar{X}$ and R determinations for variables.

When a single code is processed on more than one line simultaneously, it is desirable to obtain a subgroup representing a single line, alternating the lines each time a subgroup is drawn for that code. If the processing procedure prohibits obtaining a subgroup representing a single line, it shall be necessary to sample by code only, omitting line identity. Each subgroup thus obtained will generally represent more than one line and consequently reflect variations in the code as a whole but not variations for a single line.

(c) *Sample unit sampling.* This procedure consists of drawing a single sample unit at random at specified intervals from a production. This type of sampling may employ the use of a moving average and is applicable to a variable or a process when subgroup sampling is not feasible.

§ 52.207 Measurements, calculations, and recording data.

(a) *General.* Immediately after the sample unit or subgroup has been taken, measurements and calculations shall be made and recorded on the appropriate form as required.

(b) *Recording data on the $\bar{X}$ and R data sheet.* The data to be recorded on the $\bar{X}$ and R data sheet is as follows:

(1) The time the sample unit or subgroup is taken;

(2) The value for each individual measurement (X value);

(3) The total value for all the X values in the subgroup, when applicable;

(4) The average value ($\bar{X}$) for each subgroup, when applicable;

(5) The (Mi) value for each subgroup, when applicable;

(6) The range value (R) for each subgroup, when applicable;

(7) The sample median value ($\overline{\overline{Mi}}$) when the median is used;

(8) The sample average value ($\bar{\bar{X}}$) when required; and

(9) The average range value ($\bar{R}$) when applicable.

(c) *Recording data on the $\bar{X}$ and R control chart.* The data to be recorded on the $\bar{X}$ and R control chart is as follows:

(1) *Individual measurements (X values).* The values representing the individual measurements of each subgroup (X value) shall be plotted on the $\bar{X}$ chart. The distance between the smallest and largest value of the individual measurements in the subgroup may be used for R in lieu of plotting the range on the R chart. It is desirable to plot all the values for a subgroup on the same linear segment of the chart. Identical values are plotted adjacently in such a manner as to associate such values with the subgroup in which they occur.

(2) *The median.* When the median option is used, the median for each subgroup shall be identified on the $\bar{X}$ chart in such a manner as to make it readily distinguishable from the rest of the values in the subgroup. When a subgroup consists of an even number of individual measurements, the median represented by the arithmetic mean of the two middle values shall also be plotted on the $\bar{X}$ chart in such a manner as to associate it with the subgroup from which it was calculated.

When the median option is used for a particular production, it is not permissible to change to the option for conventional averages during the same shift.

(3) *Subgroup averages ($\bar{X}$ values).* When the option for conventional averages is used, the average of each

subgroup is calculated and recorded on the $\bar{X}$ and R data sheet. The subgroup average is then plotted on the $\bar{X}$ chart in such a manner as to associate it with the subgroup from which it was calculated. When this option is used, it is not permissible to change to the median option during the same shift.

(4) *The range* (*R value*). The range of each subgroup, when required, shall be plotted on the R chart.

(5) *The average median* (*$\overline{\overline{Mi}}$ value*) *and sample average* (*$\bar{X}$ value*). When the plotted values obviously indicate the acceptability of the lot, $\overline{Mi}$ or X need not be obtained. When the plotted values for Mi or $\bar{X}$ or both indicate the acceptability of a lot may be questionable, $\overline{Mi}$ in the case of the median option, or $\bar{X}$ in the case of the option for conventional averages must be obtained and recorded. Acceptability of the lot with respect to the sample median or sample average may then be determined in accordance with acceptance criteria as prescribed under § 52.209(a) of these standards.

[38 FR 10447, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.208 Application of sampling allowance.

The amount of sampling allowance is obtained from the sampling allowance chart in these standards. The actual value for the sampling allowance is obtained from the point of intersection of a horizontal line drawn from a point on the vertical axis representing the sample size to the diagonal line for the item involved. The value on the horizontal axis corresponding to the vertical line nearest to this point of intersection is the sampling allowance.

The sampling allowances are applied to the specified lot averages to allow for deviations from these averages that are inherent in any sampling procedure. These allowances are applied to the specified lot averages only when the sample average ($\bar{X}$ or $\overline{Mi}$) is less than $\bar{X}'_{min}$ or greater than $\bar{X}'_{max}$. When this occurs, the specification average is adjusted by subtracting the allowance from $\bar{X}'_{min}$ or adding to $\bar{X}'_{max}$, whichever is applicable.

§ 52.209 Acceptance and rejection criteria.

(a) *Conventional averages and the median*—(1) *Acceptance.* A lot shall be accepted as meeting specified requirements for a variable provided that:

(i) All X values are equal to or greater than LRL and equal to or less than URL;

(ii) All $\overline{Mi}$ or X values are equal to or greater than LRL$_{\bar{x}}$ and equal to or less than URL$_{\bar{x}}$;

(iii) $\overline{Mi}$ or $\bar{X}$ is equal to or less than X'_{max} adjusted and equal to or greater than $\bar{X}'_{min}$ adjusted; and

(iv) The condition under paragraph (a)(2)(ii) of this section does not exist.

(2) *Rejection.* A lot shall be rejected for failure to meet specified requirements for a variable under the following conditions:

(i) Failure to meet any of the requirements under paragraph (a)(1), (i), (ii), or (iii) of this section; or

(ii) All Mi or $\bar{X}$ values are less than $\bar{X}'_{min}$ or greater than $\bar{X}'_{max}$.

(b) *Moving averages*—(1) *Acceptance.* A lot shall be accepted as meeting specified requirements for a variable provided that:

(i) All X values are equal to or greater than LRL and equal to or less than URL;

(ii) All X values are equal to or greater than LRL$_{\bar{x}}$ and equal to or less than URL$_{\bar{x}}$;

(iii) $\bar{X}$ is equal to or less than X'_{max} adjusted and equal to or greater than $\bar{X}'_{min}$ adjusted; and

(iv) The condition under paragraph (b)(2)(ii) of this section does not exist.

(2) *Rejection.* A lot shall be rejected for failure to meet specified requirements for a variable under the following conditions:

(i) Failure to meet any of the conditions under paragraph (b)(1) (i), (ii), and (iii) of this section; or

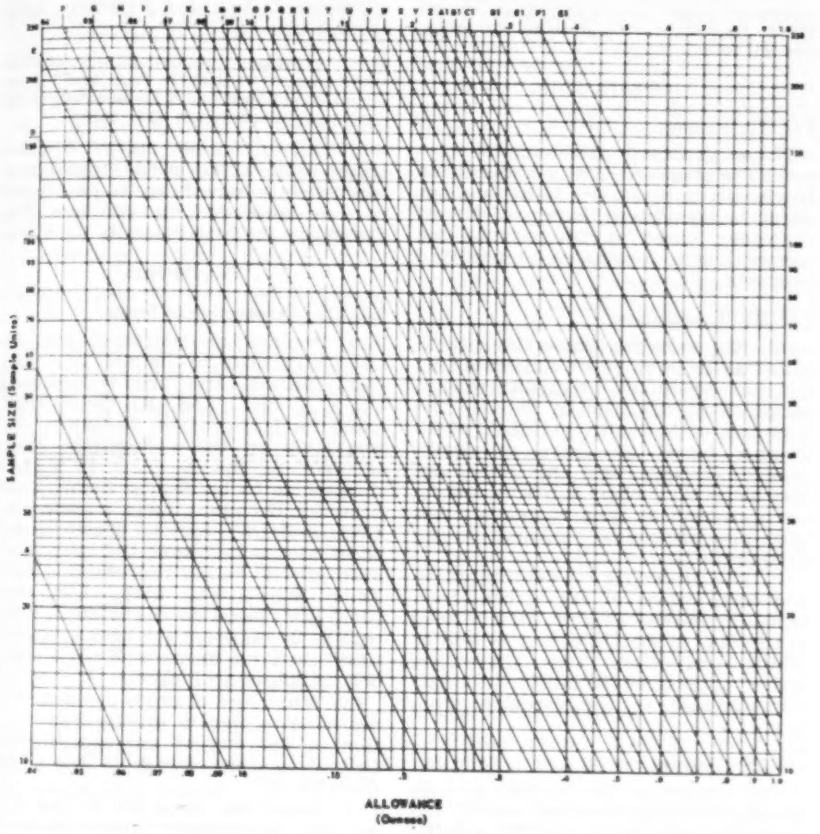
(ii) All $\bar{X}$ values are less than $\bar{X}'_{min}$ or greater than $\bar{X}'_{max}$.

[38 FR 10447, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SAMPLING ALLOWANCE CHART

§ 52.210 Sampling allowance chart.

SAMPLING ALLOWANCE CHART



Subpart—United States Standards for Determination of Fill Weights

SOURCE: 38 FR 10450, Apr. 27, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

GENERAL

§ 52.221 Purpose.

These proposed standards supplement the proposed U.S. Standards for Inspection by Variables so as to adapt them to the determination of fill of container, based on fill weights, for canned fruits, vegetables, and related products.

§ 52.222 Explanation.

(a) The variables inspection standards may be used, where applicable, by any food processor for quality control purposes. Certification by the U.S. Department of Agriculture (USDA) of fill weights based on these standards, however, is applicable only under online inspection when a USDA inspector is present at time of packing and maintains appropriate records of the filling process.

(b) The procedure for determination and certification of fill of container, based on drained weights, may be used in the case of lot inspection as well as in-line inspection. This procedure, where applicable, is outlined in the U.S. standards for the respective products.

§ 52.223 Options.

The options of the median or conventional average may be used for determining compliance of fill weights with a specified minimum average fill weight.

§ 52.224 Type of specification and applicable limits.

(a) For the determination of fill weights, a low-sided specification applies.

(b) The specification limits, and values for such limits, are specified in those U.S. Standards for Grades of canned fruits, vegetables, and related products which incorporate the fill weight procedure. Suggested specification limits, and the values for such limits, for those products for which fill weights have been established—but are not yet incorporated in the USDA grade standards—may be obtained as supplements to these standards upon request to:

Chief, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, AMS, U.S. Department of Agriculture, Washington, D.C. 20250.

(c) All of these limits, whether stated in the USDA grade standards or supplements hereof, are to be applied in accordance with the proposed U.S. Standards for Inspection by Variables.

PROCEDURE

§ 52.225 Preparation of forms.

(a) Prepare the data sheet and control charts prior to the start of a processing period. Draw lines representing the $\tilde{X}'_{min}$, LRL_x, and LRL values applicable for the product, container size, and style on the appropriate linear segment of the $\tilde{X}$ chart in such a manner as to be clearly visible when posted in the plant. Lines representing LWL_x and LWL may be drawn on the chart at the option of the user; however, all the values representing each limit ($\tilde{X}_{min}$, LWL_x, LRL_x, LWL and LRL) are placed on the $\tilde{X}$ chart adjacent to the appropriate limit and identified (in brief form) as $\tilde{X}'$, WL_x, RL_x, WL, or RL accordingly).

(b) When the R chart is used, it is desirable to place it on the lower portion of the control chart, using the bottom as zero, which is the lower limit for R.

(c) Space the limits for R′ and R_{max} on the appropriate linear segment above the zero line. The upper portion of the control chart is then used for the $\tilde{X}$ chart.

(d) Attachment 1 is an example of an $\tilde{X}$ and R data sheet. Attachment 2 is an example of a control chart which combines the $\tilde{X}$ chart and the R chart. However, use of the R chart is not required. The $\tilde{X}$ chart illustrates the use of the median option as prescribed in the proposed U.S. Standards for Inspection by Variables. The dots plotted on the $\tilde{X}$ chart represent the X values for the subgroup. The encircled dot represents the median of each subgroup. For easier identification the circle should be in a different color than the dots.

[38 FR 10450, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.226 Posting control charts.

It is desirable to post the control charts in such a place in the plant as to be clearly visible to the filler operator as well as other responsible plant personnel. The control charts serve as an aid to responsible plant personnel in controlling the filling process.

§ 52.227 Determination of tare of containers.

(a) *General.* Variations in the weight between individual empty containers (tare) must be taken into consideration when determining fill weights. These variations may be accounted for by procedure 1 or procedure 2 of this section.

(b) *Procedure 1.* Determine tare weights of each container size at least twice a week. In addition, determine tare weights whenever it is suspected that the present tare weight is no longer applicable. Some of the more common reasons for checking tare weights are changes in supply of containers, thickness of tin plate, and type of container.

(1) The number of empty containers taken at random from a given lot of containers to determine the average tare weight is as follows:

For containers equivalent to:

No. 2½ container and smaller —— not less than 10 empty containers.

Larger than No. 2½ ——— not less than 15 empty containers.

(c) *Procedure 2.* Preweigh a container (preferably stainless steel or other noncorrosive material) of suitable capacity and use this container as the standard tare. Drain the contents of the filled container as prescribed in § 52.229 and transfer drained fruit or vegetable ingredient to the preweighed tare.

§ 52.228 Sampling.

(a) *Subgroup size.* Unless otherwise specified, the subgroup size shall be five sample units.

(1) The control chart values, except for $\overline{X}_{min}$, will always be based on the specified subgroup size. When a subgroup size other than that specified is used, the values for the applicable limits must be changed accordingly.

(b) *Time and point of sampling.* The subgroups are drawn at a point in the process where no further change in the fill weight of the fruit or vegetable ingredient can occur.

(c) *Sampling frequency.* Unless otherwise specified, the sampling frequency for all canned fruits, vegetables, and related products, for which fill weights have been established shall be approximately every 45 minutes.

(1) The sampling frequency should be arranged to obtain subgroups at varying intervals and drawn in such a manner that the filler operators will not know when a subgroup will be drawn or which containers will be in the subgroup. This is important so that a nonbiased sample will be selected which will reflect the normal filling process.

[38 FR 10450, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.229 Measurements.

(a) Immediately after the subgroup has been drawn, invert each container on the hand or sieve and allow the product to drain until free from liquid, but in no case less than 10 seconds. In this step, do not remove the product from the container when procedure 1 as prescribed in § 52.227 is used. The sample units are then weighed and the net weight of the fruit or vegetable ingredient (total weight minus tare weight) for each sample unit is recorded on the $\bar{X}$ and R data sheet.

(b) In the case of procedure 1 if it is suspected that the weight of individual empty containers deviate from the average tare weight to cause an individual measurement to fall slightly below (or slightly above) LRL, the following procedure may be used:

(1) After the X value has been obtained as previously described, empty the contents of the suspected container and wipe it clean and dry.

(2) Weigh the suspected dry container. The amount of deviation is the difference between the weight of the individual container and the average tare weight.

(3) Adjust the suspected X value by the amount of deviation thus found.

(c) When adjustments for tare weight are made for individual measurements that fall slightly below LRL, adjustments must also be made for individual measurements that are slightly above LRL.

§ 52.230 Calculations and recording data.

(a) Immediately after the measurements have been obtained, the required calculations are made. All values are recorded to the nearest 0.1, rounding the values as follows:

(1) Drop any values less than 0.050—

$\bar{\bar{X}}$ calculated to be 18.743

EXAMPLE:

Record $\bar{\bar{X}}$ as 18.7

(2) Increase any values to the next 0.1 when they are 0.050 or more—

$\bar{\bar{X}}$ calculated to be 10.650

EXAMPLE:

Record $\bar{\bar{X}}$ as 10.7

(b) After the required calculations are made and recorded, the appropriate values are plotted in accordance with the proposed U.S. Standards for Inspection by Variables.

INTERPRETATIONS

§ 52.231 Interpretation of plotted values with respect to limits.

(a) *Warning limits.* The values representing LWL and $LWL_{\bar{x}}$ are provided for the processor's benefit to use for control purposes. These limits are not to be confused with the reject limits.

(1) An X value that falls between LWL and LRL or $\bar{X}$ value that falls between $LWL_{\bar{x}}$ and $LRL_{\bar{x}}$ may be expected occasionally, even when the process is still meeting requirements. This is the point, however, at which corrective action in the filling procedure may be taken.

(b) *Code segregation.* (The acceptance criteria specified in the proposed U.S. Standards for Inspection by Variables requires all X values to be equal to or above LRL for a low-sided specification and all Mi or $\tilde{X}$ values to be equal to or above $LRL_{\bar{x}}$.

(1) When an X, Mi, or $\tilde{X}$ value(s) causes a code or distinctive mark to be rejected, the code or mark for the remainder of the shift may be changed to provide a chance for subsequent production for that shift to pass.

(c) *Sampling allowances.* The sampling allowance code for each can size and style is specified in the grade standards which incorporate fill weights and the supplement to these standards for the applicable product. To determine the sampling allowance, first obtain the letter code for the appropriate container size and style from the table containing the fill weight values. Locate the line represented by this code on the sampling allowance chart accompanying the U.S. Standards for Inspection by Variables. This line represents the sampling allowance for the various sample sizes. Deduct this value from $\bar{X}'_{min}$. Do not add this value to $\tilde{X}$ or $\overline{Mi}$.

(1) The sampling allowance does not apply to a sample size of less than 10 sample units.

[38 FR 10450, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

OPTIONAL FILL WEIGHT PROCEDURE FOR SMALL LOTS

§ 52.232 Optional fill weight procedure for small lots.

(a) For lots consisting of 100 cases or less which require 4 hours or more to pack, the following minimum sampling rate and acceptance criteria may be used in lieu of the requirements and procedures outlined in the U.S. Standards for Inspection by Variables. The conventional average option must be used for this procedure. Do not use the sample median ($\overline{Mi}$).

(b) Draw a minimum of 15 sample units, one or two at a time throughout the entire production of the lot. The sampling intervals shall be such that the total sample will be representative of the lot.

(c) Accept the lot if:

(1) No X value is less than LRL.

(2) $\overline{X}$ is equal to or greater than $\tilde{X}'_{\min}$ adjusted; and

(3) The condition under paragraph (d)(3) of this section does not exist.

(d) Reject the lot if:

(1) $\overline{X}$ is less than $\tilde{X}'_{\min}$ adjusted; or

(2) One or more X values are less than LRL; or

(3) All X values are less than $\tilde{X}'_{\min}$.

$\bar{X}$ AND R DATA SHEET

USDA-AMS
F & V DIVISION

PRODUCT	STYLE	VARIETY	TARE WT.	SIZE OF CONTAINER	DATE	CODE
PLANT		INSPECTOR			RECORDED BY	

TIME		8:30a	9:05a	9:50a	10:20a	11:00a	11:35a	1:00P	1:45P				
X VALUES	1	19.4	18.6	18.5	19.1	18.4	19.8	18.7	20.2				
	2	18.4	20.9	17.7	21.0	16.6	18.8	18.6	20.6				
	3	19.0	19.4	17.9	18.5	17.6	19.9	19.9	20.0				
	4	18.9	18.8	19.3	18.4	19.7	19.2	19.1	18.8				
	5	19.6	21.7	18.2	20.4	18.4	19.1	18.8	20.7				
SUM OF X VALUES		95.3	99.4	91.6	97.4	91.2	96.8	95.1	100.3				
$\bar{X}$		19.1	19.9	18.3	19.5	18.2	19.4	19.0	20.1				
R		1.2	3.1	1.6	2.6	3.1	1.1	1.3	1.9				

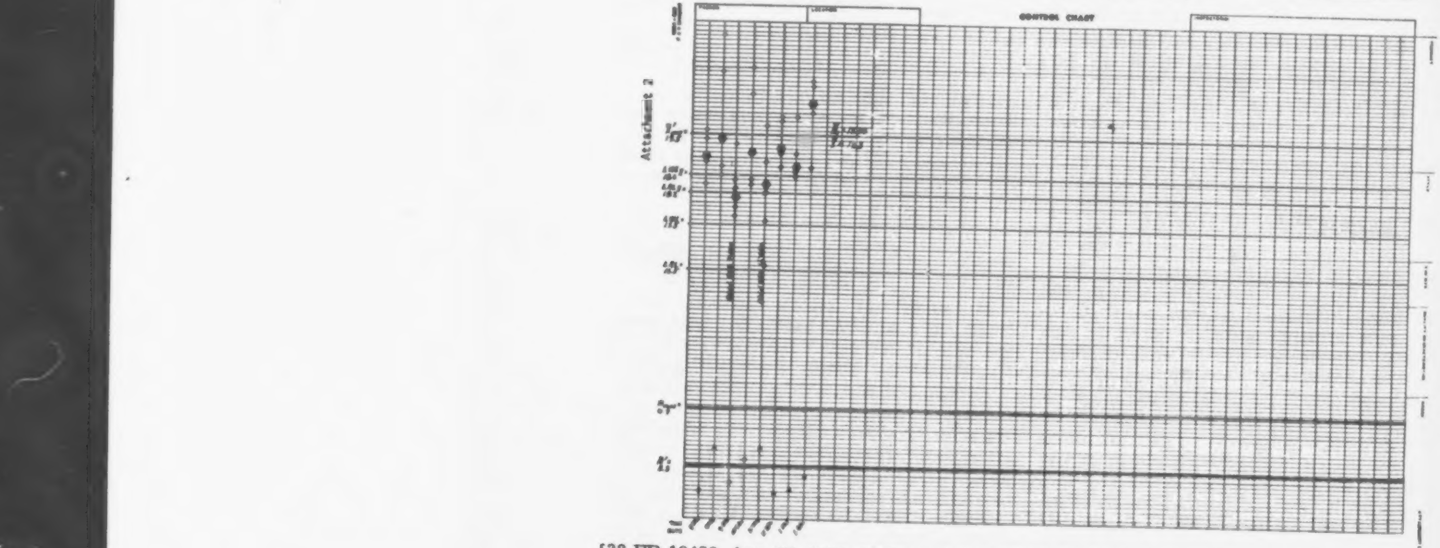
REMARKS

$\bar{X}'$ = 19.05

$\bar{\bar{X}}$ = 19.2

$\bar{R}$ = 2.0

ATTACHMENT



[38 FR 10450, Apr. 27, 1973; 38 FR 12729, May 15, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Canned Apple Juice

Source: 47 FR 5876, Feb. 9, 1982, unless otherwise noted.

§ 52.301 Product description.

(a) Canned apple juice is the unfermented juice obtained from sound, ripe apples, with or without parts. Concentrated apple juice may be added, provided that any added apple juice concentrate shall not contribute more than one-fourth of the total apple juice solids in the finished apple juice. No water may be added directly to the finished food. Natural volatile apple juice components (apple essence) may be restored to a level that provides a natural apple juice flavor.

(b) The apple juice may be processed with or without the addition of antioxidants and is sufficiently processed to assure preservation of the product in hermetically sealed containers.

§ 52.302 Styles of canned apple juice.

(a) Style I, Clear—typical of clarified apple juice.

(b) Style II, Cloudy—typical of nonclarified apple juice, but not a crushed or disintegrated apple product.

§ 52.303 Definitions of terms.

(a) *Absence of defects* means the degree of freedom from sediment or other residue, dark specks, particles of seeds, coarse particles of pulp, or other defects.

(b) *Acid* means grams of acid, calculated as malic acid, per 100 g of apple juice determined by titration with standard sodium hydroxide solution, using phenolphthalein as indicator.

(c) *Brix* means the percent, by weight, of natural apple soluble solids in the apple juice, corrected to 20° C (68° F).

(d) *Color* means the apple juice is typical of freshly pressed juice.

(e) *Flavor* means the degree of excellence and palatability of the apple juice with a distinct flavor and aroma typical of apple juice that has been properly processed.

§ 52.304 Grades.

(a) *U.S. Grade A* is the quality of canned apple juice that:

(1) Meets the applicable requirements of Table I or Table II; and

(2) Scores not less than 90 points.

(b) *U.S. Grade B* is the quality of canned apple juice that:

(1) Meets the applicable requirements of Table I or Table II; and

(2) Scores not less than 80 points.

(c) *Substandard* is the quality of canned apple juice that fails to meet the requirements for U.S. Grade B.

§ 52.305 Fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container is not a factor of quality for the purposes of these standards. It is recommended that each container be filled as full as practicable with apple juice and that the product occupies at least 90 percent of the volume of the container.

§ 52.306 Determining the grade.

(a) The grade of canned apple juice is determined by considering the requirements of each grade with respect to the factors of color, absence of defects, and flavor.

(b) The relative importance of each factor is expressed numerically on the scale of 0 to 100 points. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Absence of defects	20
Flavor	60
Total score	100

§ 52.307 Determining the rating for each factor.

The essential variations within each factor are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.308 Requirements for grades.

TABLE I.—STYLE I, CLEAR

Factors	Grade A	Grade B
Color	Good (bright, sparkling)	Reasonably good (slightly translucent)
Score points	18–20	16–17
Absence of defects:		
Amorphous sediment or residue	Slight	Moderate
Nonamorphous sediment or residue, dark specks	Trace	Moderate
Particles of seeds, pulp or other defects	None	Slight
Score points	18–20	16–17
Flavor	Good	Reasonably good
Score points	54–60	48–53
Total score	90–100	80–89
Analytical:		
Brix:		
Minimum (degrees)	11.0	10.5
Acid: (calculated as malic)		
Minimum (g/100 g)	0.24	0.19
Maximum (g/100 g)	0.67	0.77

TABLE II.—STYLE II, CLOUDY

Factors	Grade A	Grade B
Color	Good (slightly translucent to definitely cloudy)	Reasonably good (typical but not off-color)
Score points	18–20	16–17
Absence of defects:		
Amorphous and non-amorphous sediment or residue	Normal	Normal
Dark specks	Trace	Moderate
Particles of seeds, coarse particles of pulp or other defects	None	Slight
Score points	18–20	16–17
Flavor	Good	Reasonably good
Score points	54–60	48–53
Total score	90–100	80–89
Analytical:		
Brix:		
Minimum (degrees)	11.0	10.5
Acid: (calculated as malic)		
Minimum (g/100 g)	0.24	0.19
Maximum (g/ 100 g)	0.67	0.77

§ 52.309 Determining the grade of a lot.

The grade of a lot of canned apple juice covered by these standards is determined by the procedures found in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

§ 52.310 Score sheet for canned apple juice.

Size and kind of container ....
Container mark or identification ....
Label ....
Liquid measure (fl. oz and/or ml) ....
Vacuum (in inches) ....
Brix (degrees) ....
Acid (malic: g/100 g) ....

Factors		Score points	
Color	20	(A)	18–20
		(B) [1]	16–17
		(SSTD) [2]	0–15
Absence of defects	20	(A)	18–20
		(B) [1]	16–17
		(SSTD) [2]	0–15
Flavor	60	(A)	54–60
		(B) [1]	48–53
		(SSTD) [2]	0–47
Total score	100		

Grade ....

[1] May not be graded above Grade B.
[2] May not be graded above Substandard.

Subpart—United States Standards for Grades of Canned Applesauce

SOURCE: 47 FR 5878, Feb. 29, 1982, unless otherwise noted.

§ 52.331 Identity.

"Canned applesauce" is the product represented as defined in the Standards of Identity for Canned Applesauce (21 CFR 145.110) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.332 Color types.

(a) *Natural color.* (1) Canned applesauce in which the color of the finished product is derived wholly from the apple ingredient.

(2) When a spice or spices have been added, consideration is given to the color, if any, imparted by the added spice or spices.

(b) *Artificially colored.* Canned applesauce in which the color of the finished product is derived from an artificial coloring substance as permitted in the Federal Food and Drug definitions and Standards of Identity.

§ 52.333 Flavor types.

(a) *Natural flavor.* Natural flavor canned applesauce is the product in which the flavor is derived from the apple ingredient and other permitted additives exclusive of flavorings or spices.

(b) *Flavored.* Flavored canned applesauce is the product in which the flavor is derived substantially from an added flavoring ingredient, including artificial flavorings.

(c) *Spiced.* Spiced canned applesauce is the product in which the flavor is derived substantially from the added spice or spices.

§ 52.334 Types of pack.

(a) *Unsweetened.* Canned applesauce prepared without the addition of nutritive carbohydrate sweeteners. The product shall test not less than 9 degrees Brix.

(b) *Sweetened.* Canned applesauce with nutritive carbohydrate sweeteners added.

§ 52.335 Styles.

(a) *Regular (or comminuted).* Canned applesauce in which the apple ingredient has been comminuted into granular particles.

(b) *Chunk (or chunky).* Canned applesauce in which the apple ingredient has been chopped into small pieces.

§ 52.336 Definitions of terms.

(a) *Absence of defects* means the degree of freedom from particles of seeds, discolored apple particles, peel, carpel tissue, stamens, and other objectionable particles.

(b) *Brix* means the percent, by weight, of natural apple soluble solids and added sweetener, if any, corrected to 20° C (68° F).

(c) *Carpel tissue* means the tough, sometimes hard and sharp tissue from the center portion (core) of the apple surrounding the seed cavity.

(d) *Color* means the color typical of the variety or varieties used in other than "spice flavored" or "artificially colored."

(e) *Consistency* means the flow characteristic of the product and the degree of separation of free liquid.

(f) *Discolored apple particles* mean apple particles that are discolored by bruise or other means to the extent that they do not blend well with the normal color of the product and are noticeable.

(g) *Finish* means the following: the texture and tenderness of the apple particles; the evenness of the division of apple particles in regular (or comminuted) style; and the proportion of chunks or pieces of apples in relation to fine apple particles in chunk (or chunky) style.

(h) *Flavor* means the degree of excellence of the natural flavor and aroma of the apple ingredient; the apparent relationship of the acidity to sweetness; the freedom from undesirable flavors; and with respect to flavored and spiced types, the flavor balance of the apple ingredient in relation to the added flavor of spice ingredient(s).

(i) *Peel* means apple peel that does not blend well with the normal color of the product and is noticeable or that is tough whether or not it is visually noticeable.

(j) *Seed particles* mean whole seeds or pieces of seed and portion of the core of the apple.

(k) *Stamen* means the dark hairlike substance from the blossom end of the apple.

§ 52.337 Grades.

(a) *U.S. Grade A* is the quality of canned applesauce that:

(1) Meets the applicable requirements of Table I or Table II; and

(2) Scores not less than 90 points.

(b) *U.S. Grade B* is the quality of canned applesauce that:

(1) Meets the applicable requirements of Table I or Table II; and

(2) Scores not less than 80 points.

(c) *Substandard* is the quality of canned applesauce that fails to meet the requirements for U.S. Grade B.

§ 52.338 Fill of container.

The fill of container is not incorporated in the grades of the finished product, since fill of container is not a factor of quality for the purposes of these standards. The standard of fill of container as specified in the Standard of Fill of Container for Canned Applesauce (21 CFR 145.110(c)) issued under the Federal Food, Drug, and Cosmetic Act, is a fill of not less than 90 percent of the total capacity of the containers (21 CFR 130.12(b)); except that in the case of glass containers having a total capacity of 192 ml (6.5 fl oz) or less, the fill is not less than 85 percent.

§ 52.339 Recommended sample unit size.

The sample unit size for evaluating the factors of absence of defects and consistency is the amount of applesauce required to fill level full a cylinder measuring 7.6 cm (3 in) inside diameter and 8.3 cm (3.25 in) high.

§ 52.340 Determining the grade.

(a) The grade of canned applesauce is determined by considering the respective ratings for the factors of color, consistency, absence of defects, finish, and flavor.

(b) The relative importance of each factor that is scored is expressed numerically on the scale of 0 to 100 points. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Consistency	20
Absence of defects	20
Finish	20
Flavor	20
Total score	100

§ 52.341 Determining the rating for each factor.

The essential variations within each factor that is scored are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "18 to 20 points" means, 18, 19, or 20 points).

§ 52.342 Requirements for grades.

TABLE I—REGULAR (OR COMMINUTED)

Factors	Grade A	Grade B
Color:		
Natural	Bright, practically uniform, typical of variety or varieties used, no discoloration due to oxidation or scorching.	Dull, reasonably uniform, typical of variety or varieties used. Slightly brown, slightly pink or slightly grey.
Spice flavored	Characteristic of the color imparted by added spice, free from discoloration due to oxidation or scorching.	The color imparted by added spice may be slightly affected by pink or grey color, but is not off color.
Artificially colored	Bright and distinct	Reasonably bright and distinct.
Score points	18 to 20	16 to 17.
Consistency:		
Product flow	Not more than 6.5 cm (2.5 in)	Not more than 8.5 cm (3.3 in).
Free liquid	Not more than 0.7 cm (0.3 in)	Not more than 1 cm (0.4 in).
Score points	18 to 20	16 to 17.
Absence of defects:		
Dark Stamens	Not more than 3	Not more than 5.
Seed particles, peel, discolored apple particles, carpel tissue.	Not more than 0.5 cm^2 (0.08 in^2) total but	Not more than 1.0 cm^{2}1 (0.16 in^2) total but.
Medium and dark colored particles.	Not more than 0.25 cm^2 (0.04 in^2)	Not more than 0.5 cm^2 (0.08 in^2).
Score points	18 to 20	16 to 17.
Finish	Evenly divided, not lumpy, pasty, or salvy	Evenly divided, slightly salvy or pasty.
Score points	18 to 20	16 to 17.
Flavor	Good natural sugar-acid balance	Reasonably good natural sugar-acid balance.
Unsweetened	Slightly tart or slightly bland. Free from astringent flavor.	Moderately tart, may be bland, slightly astringent flavor.
Sweetened	Slightly tart to sweet. Free from astringent flavor	May be tart, not excessively sweet, slightly astringent.

TABLE I—REGULAR (OR COMMINUTED)—Continued

Factors	Grade A	Grade B
Spice flavored	Flavor is distinct and characteristic of the added spice(s) or flavoring(s) but not strong	Flavor derived from added flavoring(s) or spice(s) may be slightly weak or strong but not objectionable.
Score points	18 to 20	16 to 17.
Total score	90 to 100	80 to 89.
Analytical:		
Brix unsweetened	Not less than 9.0 degrees	Not less than 9.0 degrees.
Brix sweetened	Not less than 15.5 degrees	Not less than 14.5 degrees.

TABLE II—CHUNK (OR CHUNKY)

Factors	Grade A	Grade B
Color:		
Natural	Bright, practically uniform, typical of variety or varieties used. No discoloration due to oxidation or scorching.	Dull, reasonably uniform, typical of variety or varieties used. Slightly brown, slightly pink or slightly grey.
Spice flavored	Characteristic of the color imparted by added spice, free from discoloration due to oxidation or scorching.	The color imparted by added spice may be slightly affected by pink or grey color, but is not off color.
Artifically colored	Bright and distinct	Reasonably bright and distinct.
Score points	18 to 20	16 to 17.
Consistency:		
Product flow	Not more than 7.5 cm (2.95 in)	Not more than 9.5 cm (3.75 in).
Free liquid	Slight amount	Moderate amount.
Score points	18 to 20	16 to 17.
Absence of defects:		
Dark stamens	Not more than 3	Not more than 5.
Seed particles, peel, discolored apple particles, carpel tissue.	Not more than 0.5 cm² (0.08 in²) total but	Not more than 1 cm² (0.16 in²) total but
Medium and dark colored particles.	Not more than 0.25 cm² (0.04 in²)	Not more than 0.5 cm² (0.08 in²).
Score points	18 to 20	16 to 17.
Finish	High proportion of apple chunks. Any fine apple particles present, do not more than moderately affect the appearance or eating quality of the product.	Fairly high proportion of apple chunks. Any fine apple particles present do not seriously affect the appearance or eating quality of the product.
Score points	18 to 20	16 to 17.
Flavor	Good natural sugar-acid balance	Reasonably good natural sugar-acid balance.
Unsweetened	Slightly tart or slightly bland. Free from astringent flavor.	Moderately tart, may be bland, slightly astringent flavor.
Sweetened	Slightly tart to sweet, free from astringent flavor	May be tart, not excessively sweet, slightly astringent.
Spice flavored	Flavor is distinct and characteristic of the added spice(s) or flavoring(s) but not strong.	Flavor derived from added flavoring(s) or spice(s) may be slightly weak or strong but not objectionable.
Score points	18 to 20	16 to 17.
Total score	90 to 100	80 to 89.
Analytical:		
Brix unsweetened	Not less than 9.0 degrees	Not less than 9.0 degrees.
Brix sweetened	Not less than 15.5 degrees	Not less than 14.5 degrees.

§ 52.343 Soluble solids determination.

The soluble solids content of canned applesauce is the soluble solids as determined by the refractometric method prescribed in "Official Methods of Analysis of the Association of Official Analytical Chemists," except that no correction is made for water-insoluble solids. The soluble solids is expressed as "degrees Brix".

§ 52.344 Determining the grade of a lot.

The grade of a lot of canned applesauce covered by these standards is determined by the procedures set forth in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

§ 52.345 Score sheet for canned applesauce.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (oz or g or kg) ....
Brix (degrees) ....
Style ....
Vacuum (in inches) ....

Factors		Score points	
Color	20	(A)	18 to 20.
		(B) [1]	16 to 17.
		(SStd)[2]	0 to 15.
Consistency	20	(A	18 to 20.
		(B) [1]	16 to 17.
		(SStd) [2]	0 to 15.
Absence of defects	20	(A)	18 to 20.
		(B) [1]	16 to 17.
		(SStd) [2]	0 to 15.
Finish	20	(A)	18 to 20.
		(B) [1]	16 to 17.
		(SStd) [2]	0 to 15.
Flavor	20	(A)	18 to 20.
		(B) [1]	16 to 17.
		(SStd) [2]	0 to 15.
Total	100		

Grade ....

[1] May not be graded above Grade B.
[2] May not be graded above Substandard.

Subpart—United States Standards for Grades of Frozen Apples

SOURCE: 19 FR 2157, Apr. 15, 1954, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.361 Product description.

Frozen apples are prepared from sound, properly ripened fruit of Malus sylvestris (Pyrus malus); are peeled, cored, trimmed, sliced, sorted, and washed; are properly drained before filling into containers; may be packed with or without the addition of a nutritive sweetening ingredient and any other ingredient permissible under the provisions of the Federal Food, Drug, and Cosmetic Act; and are frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.362 Styles of frozen apples.

(a) "Slices" means frozen apples consisting of slices of apples cut longitudinally and radially from the core axis.

§ 52.363 Grades of frozen apples.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen apples that possess similar varietal characteristics; that possess a good flavor; that possess a good color; that are practically uniform in size; that are practically free from defects; that possess a good character; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart. *Provided:* That the frozen apples may be only fairly uniform in size, if the total score is not less than 85 points.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of frozen apples that possess similar varietal characteristics; that possess a fairly good flavor; that possess a fairly good color; that are fairly uniform in size; that are fairly free from defects; that possess a fairly good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen apples that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FACTORS OF QUALITY

§ 52.364 Ascertaining the grade.

(a) The grade of frozen apples is ascertained by considering the requirements with respect to varietal characteristics, which are not scored, and the factors of color, size, defects, and character, which are scored.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors is:

Factors	Points
Color	20
Size	20
Defects	20
Character	40
Total score	100

(c) The scores for the factors of color, size, defects, and character are determined immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units.

(d) "Good flavor" means that the product has a good, characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(e) "Fairly good flavor" means that the product may be lacking in good flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

§ 52.365 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.366 Color.

(a) (*A*) *classification*. Frozen apples that possess a good color may be given a score of 17 to 20 points. "Good color" means that the frozen apples, internally and externally, possess a reasonably uniform bright color, characteristic of apples of similar varieties.

(b) (*C*) *classification*. Frozen apples that possess a fairly good color may be given a score of 14 to 16 points. Frozen apples that fall into this classification shall not be graded above U.S Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the frozen apples possess a color that is typical of apples of similar varietal characteristics, that may be variable, and that the product may possess a slight but not markedly brown or gray cast and shall be practically free from internal discoloration.

(c) (*SStd*) *classification*. Frozen apples that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.367 Size.

(a) *General*. The factor of size refers to the degree of wholeness and to the uniformity of thickness of the units.

(1) "Practically whole slice" means that the slice may be cut or broken but at least ¾ of the original slice remains.

(b) (*A*) *classification*. Frozen apples that are practically uniform in size may be given a score of 17 to 20 points. "Practically uniform in size" means that: At least 90 percent, by weight, of the product consists of whole or practically whole slices of 1¼ inches in length or longer, and that of the 90 percent, by weight, of the product consisting of units of the most uniform thickness, the thickness of the slices does not vary more than ¼ inch.

(c) (*C*) *classification*. Frozen apples that are fairly uniform in size may be given a score of 14 to 16 points. "Fairly uniform in size" means that at least 75 percent, by weight, of the product consists of whole or practically whole slices of 1¼ inches in length or longer.

(d) (*SStd*) *classification*. Frozen apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.368 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous matter, from damaged or seriously damaged units, and from carpel tissue.

(1) "Harmless extraneous matter" means any vegetable substance (including, but not being limited to, a leaf, stem, or portions thereof, cores and portions of cores, and seeds), that is harmless.

(2) "Damaged unit" means any unit possessing green peel that exceeds in the aggregate an area of a circle ½ inch in diameter, or red peel that exceeds in the aggregate an area of a circle ¼ inch in diameter, light brown bruise that exceeds the area of a circle ½ inch in diameter or which is more than ¼ inch deep, and any unit in which the appearance or eating quality is materially affected by blossom end material, dark brown bruise, or other internal or external discoloration, or by any other means.

(3) "Seriously damaged unit" means any unit damaged to such an extent that the appearance or eating quality is seriously affected.

(4) "Practically free from carpel tissue" means that for each 16 ounces of the product, the carpel tissue present does not exceed in the aggregate an area equal to ¾ square inch.

(5) "Fairly free from carpel tissue" means that for each 16 ounces of the product the carpel tissue present does not exceed an area equal to 1½ square inches.

(b) (*A*) *classification.* Frozen apples that are practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that extraneous matter may be present that does not materially affect the appearance or eating quality of the product; that the product is practically free from carpel tissue; and that not more than a total of 5 percent, by weight, of the units may be damaged, of which not more than 1 percent, by weight, of all the units may be seriously damaged: *Provided,* That extraneous matter, damaged and seriously damaged units, singly or in combination, do not materially affect the appearance or eating quality of the product.

(c) (*C*) *classification.* Frozen apples that are fairly free from defects may be given a score of 14 to 16 points. Frozen apples that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that extraneous matter may be present that does not seriously affect the appearance or eating quality of the product; that the product is fairly free from carpel tissue; and that not more than a total of 15 percent, by weight, of the units may be damaged, of which not more than 3 percent, by weight, of all the units may be seriously damaged: *Provided,* That extraneous matter, damaged and seriously damaged units, singly or in combination, do not seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Frozen apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.369 Character.

(a) *General.* The factor of character refers to the texture of the units and to the tendency to retain their conformation without material softening or disintegration.

(1) "Mushy apples" means slices or units or portions thereof that are a pulpy mass and of a consistency approximating applesauce.

(b) (*A*) *classification.* Frozen apples that possess a good character may be given a score of 34 to 40 points. "Good character" means that the units possess a reasonably uniform texture, are firm but not hard, with not more than 3 percent of the weight of the product consisting of mushy apples.

(c) (*C*) *classification.* Frozen apples that possess a fairly good character may be given a score of 28 to 33 points. Frozen apples that fall into this classification shall not be graded above U.S.

Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the slices may be variable in texture, with not more than 12 percent of the weight of the product consisting of units that are markedly hard, markedly soft, or mushy.

(d) *(SStd) classification.* Frozen apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.370 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.371 Score sheet for frozen apples.

Size and kind of container

Container mark or identification

Label

Net weight (ounces)

Style

Ratio of fruit-sugar

Style of pack (sugar or sirup)

Sirup density (degrees Brix)

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Size	20	(A)	17-20
		(C)	14-16
		(SStd.)	[1] 0-13
Defects	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Character	40	(A)	34-40
		(C)	[1] 28-33
		(SStd.)	[1] 0-27
Total score	100		

Factors	Score points
Good flavor	
Fairly good flavor	
Grade	

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Asparagus

SOURCE: 34 FR 5152, Mar. 13, 1969, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPE, AND STYLES

§ 52.381 Product description.

Frozen asparagus consists of sound and succulent fresh shoots of the asparagus plant (asparagus officianalis). The product is prepared by sorting, trimming, washing, and blanching as necessary to assure a clean and wholesome product. It is then frozen and stored at temperatures necessary for preservation.

§ 52.382 Types.

(a) "Green" or "all-green" consists of units of frozen asparagus which are typical green, light green, or purplish green in color.

(b) "Green-white" consists of frozen asparagus spears and tips which have typical green, light green, or purplish green color to some extent but which are white in the lower portions of the stalk.

§ 52.383 Styles.

(a) "Spears" (or "stalks") style consists of units composed of the head and adjoining portion of the shoot that are 3 inches or more in length.

(b) "Tips" style consists of units composed of the head and adjoining portion of the shoot that are less than 3 inches in length.

(c) "Cut spears" or "cuts and tips" style consists of the head and portions of the shoot cut transversely into units 2 inches or less but not less than one-half inch in length. To be considered of this style, head material shall be present in these amounts for the respective lengths of cuts:

(1) *1¼ inches or less.* Not less than 18 percent (average) by count, of all cuts, are head material.

(2) *Longer than 1¼ inches.* Not less than 25 percent (average) by count, of all cuts are head material.

(d) "Center cuts" or "cuts" style consists of portions of shoots (with or without head material) that are cut transversely into units not less than one-half inch in length and that fail to meet the definition for "cut spears" or "cuts and tips" style.

DEFINITIONS OF TERMS

§ 52.384 Definitions of terms.

(a) *Absolute limit (AL).* Limit for maximum number of defects permitted in a sample unit.

(b) *Defects.* Any specifically defined variation from a particular requirement. Defects are classified as to "minor," "major," "severe," and "critical."

(c) *Head.* In "cut spears" or "cuts and tips" style means:

(1) A tip end which is three-eighths inch or more in length; or

(2) An upper portion of a shoot which possesses a substantial amount of compact head material.

(d) *Sample.* The number of sample units to be used for inspection of the lot.

(e) *Sample unit.* The amount of product specified to be used for inspection. It may be:

(1) The entire contents of a container, or

(2) A portion of the contents of a container,

(3) A combination of the contents of two or more containers, or

(4) A portion of unpackaged product.

(f) *Unit.* The term "unit", not otherwise qualified, means any individual portion of an asparagus shoot three-eighths inch of more in length.

(g) *Loose material.* "Loose material" means any loose or shattered asparagus material and cut or broken pieces that are less than three-eighths inch in length.

[34 FR 5152, Mar. 13, 1969, as amended at 35 FR 5662, Apr. 8, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SAMPLE UNIT SIZE

§ 52.385 Sample unit size.

Compliance with requirements for factors of quality is based on the following sample unit size for the respective style of pack:

(a) Spears; tips—50 spears or 50 tips.

(b) Cut spears; cuts and tips; center cuts and cuts—100 pieces.

SIZES

§ 52.386 Size of frozen asparagus.

The size of frozen asparagus in spears or tips style is determined by measuring the longest dimension at right angles to the longitudinal axis of the unit at the largest dimension of the unit. The word and number designations of the various sizes of frozen asparagus are shown in Table I.

TABLE I—SIZES OF FROZEN ASPARAGUS SPEARS AND TIPS

Word designation	Number designation	Diameter in inches
Small	1	Less than 5/16 inch.
Medium	2	5/16 inch or larger but less than 8/16 inch.
Large (Jumbo)	3	8/16 inch or larger but less than 11/16 inch.
Extra Large (Colossal)	4	11/16 inch or larger.
Blend of sizes	(1)	(1).
Mixture of sizes	(2)	(2).

[1] A blend of not more than three adjacent sizes which does not meet the acceptance criteria for a single size but meets the criteria for blend of sizes (Tables II and III).

[2] Fails to meet the requirements of a single size or blend of sizes.

[34 FR 5152, Mar. 13, 1969, as amended at 35 FR 5662, Apr. 8, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.387 Size classification and compliance.

Frozen asparagus in "spears" and "tips" styles are considered as meeting the designated single size or blend of sizes, if they meet the criteria specified in Tables II and III. Defects are classified as to minor, major, and severe. Each "X" mark in Table II represents "one (1) defect."

TABLE II

Size classification	Defects	Classification		
		Minor	Major	Severe
Single sizes:				
Small	Medium size	x		
	Large size		x	
	Extra-Large size			x
Medium	Small size		x	
	Large size	x		
	Extra-Large size			x
Large	Small size			x
	Medium size		x	
	Extra-Large size	x		
Extra-Large	Small size			x
	Medium size		x	
	Large size	x		
Blends of sizes:				
Small/Medium blend	Large size	x		
	Extra-Large size	x		
Medium/Large blend	Small size	x		
	Extra-Large size	x		
Large/Extra-Large blend	Small size	x		
	Medium size	x		
Small/Medium/Large blend	Extra-Large size	x		
Medium/Large/Extra-Large blend	Small size	x		

TABLE III

Number of sample units	Number of spears or tips	Tolerances for size compliance			
		Single sizes		Blends of sizes	
		Severe	Major	Total [2]	Minor in total [3]
Maximum defects permitted in any sample unit (AL) [1]		5	10	15	10
		in the total sample			
1	50	3	7	12	7
2	100	5	13	21	13
3	150	7	18	30	18
4	200	9	22	39	22
5	250	10	27	47	27
6	300	12	32	55	32
7	350	14	36	63	36
8	400	15	41	72	41
9	450	17	45	80	45
10	500	18	50	90	50
11	550	20	54	96	54
12	600	21	59	104	59
13	650	23	63	112	63
14	700	24	68	121	68
15	750	26	72	129	72
16	800	27	76	140	76
17	850	29	81	145	81
18	900	30	85	153	85
19	950	32	90	161	90
20	1,000	33	94	169	94
21	1,050	35	98	177	98

[1] In any sample unit, except the first one of 50 spears or tips.

[2] "Total"—the sum of "Severe", "Major", and "Minor" defects as applicable.

[3] In "Blends of Sizes", "Minor" and "Total" defects are the same.

[34 FR 5152, Mar. 13, 1969, as amended at 35 FR 5662, Apr. 8, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

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GRADES, FACTORS OF QUALITY, AND GRADE COMPLIANCE

§ 52.388 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen asparagus that is of similar varietal characteristics; that has a good flavor and odor; that has no grit or silt present that affects the appearance or edibility of the product; in which no more than 5 percent, by weight, of loose material may be present; and that has an attractive appearance and eating quality within the limits specified for the various quality factors.

(b) "U.S. Grade B" or ("U.S. Extra Standard") is the quality of frozen asparagus that is of similar varietal characteristics; that has a good flavor and odor; that has no more than a trace of grit or silt present that slightly affects the appearance or edibility of the product; in which no more than 10 percent, by weight, of loose material may be present; and that has a reasonably attractive appearance and eating quality within the limits specified for the various quality factors.

(c) "Substandard" is the quality of frozen asparagus that fails to meet the requirements of U.S. Grade B.

[34 FR 5152, Mar. 13, 1969, as amended at 35 FR 5663, Apr. 8, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.389 Factors of quality and grade compliance.

(a) The grade of a lot of frozen asparagus is based on compliance with requirements for the following quality factors:

(1) Color (Table IV);

(2) Uniformity of lengths (Table IV);

(3) Character (Table V);

(4) Damage (Table V); and

(5) Harmless extraneous vegetable material (Table VI).

(b) Defects are classified as to minor, major, severe, or critical. Each "X" mark in Tables IV, V, and VI represents "one (1) defect."

TABLE IV—CLASSIFICATION OF DEFECTS

[Color—Length]

Quality factors	Defects	Classification		
		Minor	Major	Severe
Color	Green or all-green spears or tips:			
	White or yellowish-white color exceeding ¼ inch up to ⅓ the length of the stalk		X	
	White or yellowish-white color over ⅓ the length of the stalk			
Color	Green-white spears or tips: White or yellowish-white color exceeding ⅓ the length of the stalk		X	
	All types:			
	Cut Spear; Cuts and Tips; "Cuts", Center Cuts styles:			
	White or yellowish-white; or partially of such color		X	
Uniformity of length	Spears; Tips styles: Any unit which varies more than 1½ inches from the predominant length of the sample unit	X		
	Cut Spears; Cut and Tips; Cuts, Center Cuts Style:			
	Any unit of cut asparagus, less than ½ inch in length (excluding head material or loose material)	X		
	Any unit of cut asparagus, more than 2 inches in length		X	

TABLE V—CLASSIFICATION OF DEFECTS, CHARACTER—DAMAGE

Quality factors	Defects	Classification		
		Minor	Major	Severe
Character	Spears and tips styles:			
	In Grade A only—			
	Reasonably well developed (worse than Plate 1 but not worse than Plate 2 or 3)		X	
	In all grades—			
	Poorly developed (worse than Plate 2 or 3):			
	Seedy		X	

TABLE V—CLASSIFICATION OF DEFECTS, CHARACTER—DAMAGE—Continued

Quality factors	Defects	Classification		
		Minor	Major	Severe
	Flowered			X
	Cut spears or cuts and tips style:			
	In all grades—			
	Poorly developed (worse than Plate 2 or 3):			
	Seedy	X		
	Flowered		X	
	Tough fiber development:			
	2 inches or less		X	
	More than 2 inches or woody units of any length			X
Damage	Shattered heads—broken or shattered to the extent that it is definitely noticeable	X		
	Misshappen—badly crooked or affected in appearance by doubles or malformations	X		
	Poorly cut—angle of cut less than 45 degrees—cut is ragged or partially cut	X		
	Discoloration, mechanical injury, pathological or damaged by other means to the extent that the appearance and eating quality of a unit is affected:			
	Slightly	X		
	Materially		X	
	Seriously			X

For interpretative guides, see USDA illustrations of "Stages of Development in Frozen Asparagus," which are a part of this document.

TABLE VI—CLASSIFICATION OF DEFECTS

[Extraneous material]

Quality factors	Defects	Classification			
		Minor	Major	Severe	Critical
Harmless extraneous vegetable material	Grass, weeds, leaves, stems, and dried stalks:				
	1 inch or less	X			
	More than 1 inch but not more than 2 inches		X		
	More than 2 inches but not more than 3 inches			X	
	More than 3 inches				X

TABLE VII

Number of sample units	Number of spears or tips	Grade compliance spears, and tips							
		U.S. Grade A				U.S. Grade B			
		Critical	Severe	Major	Total [2]	Critical	Severe	Major	Total [2]
Maximum defects permitted in any sample unit (AL) [1]		0	5	8	15	2	8	13	25
		In the total sample							
1	0	0	3	6	12	1	6	10	20
2	100	0	5	11	21	2	11	18	37
3	150	0	7	15	30	3	15	25	53
4	200	0	9	19	39	3	19	33	68
5	250	0	10	23	47	4	23	40	84
6	300	0	12	27	55	4	27	47	99
7	350	0	14	30	63	5	30	54	114
8	400	0	15	34	72	5	34	61	130
9	450	0	17	38	80	6	38	68	145
10	500	0	18	42	90	6	42	76	159
11	550	0	20	45	96	7	45	81	175
12	600	0	21	49	104	7	49	88	190
13	650	0	23	53	112	8	53	95	204
14	700	0	24	56	121	8	56	102	219

TABLE VII—Continued

Number of sample units	Number of spears or tips	Grade compliance spears; and tips							
		U.S. Grade A				U.S. Grade B			
		Critical	Severe	Major	Total [2]	Critical	Severe	Major	Total [2]
15	750	0	26	60	129	9	60	108	234
16	800	0	27	64	140	9	64	117	249
17	850	0	29	67	145	9	67	122	264
18	900	0	30	71	153	10	71	129	278
19	950	0	32	74	161	10	74	136	293
20	1000	0	33	78	169	11	78	142	308
21	1050	0	35	81	177	11	81	149	322

[1] In any sample unit, except the first one of 50 spears or tips.
[2] "Total"—the sum of "Critical", "Severe", "Major", and "Minor" defects, as applicable.

TABLE VIII

Number of sample units	Number of spears or tips	Grade compliance spears; and cuts							
		U.S. Grade A				U.S. Grade B			
		Critical	Severe	Major	Total [2]	Critical	Severe	Major	Total [2]
Maximum defects permitted in any sample unit (AL) [1]		0	5	8	15	2	8	13	25
		In the total sample							
1	100	0	5	11	21	2	11	18	37
2	200	0	9	19	39	3	19	33	68
3	300	0	12	27	55	4	27	47	99
4	400	0	15	34	72	5	34	61	130
5	500	0	18	42	90	6	42	76	160
6	600	0	21	49	104	7	49	88	190
7	700	0	24	56	121	8	56	102	219
8	800	0	27	64	140	9	64	117	249
9	900	0	30	71	153	10	71	129	278
10	1,000	0	33	78	169	11	78	142	308
11	1,100	0	36	85	185	12	85	156	337
12	1,200	0	39	92	200	12	92	169	366
13	1,300	0	42	99	216	13	99	182	396
14	1,400	0	45	106	232	14	106	195	425
15	1,500	0	47	113	248	15	113	209	454
16	1,600	0	50	120	264	16	120	222	483
17	1,700	0	53	127	279	17	127	235	512
18	1,800	0	56	134	295	17	134	248	541
19	1,900	0	59	141	311	18	141	261	570
20	2,000	0	62	148	326	19	148	274	599
21	2,100	0	64	155	342	20	155	287	628

[1] In any sample unit, except the first one of 100 cuts.
[2] "Total"—the sum of "Critical", "Severe", "Major", and "Minor" defects, as applicable.

[34 FR 5152, Mar. 13, 1969, as amended at 35 FR 5663, Apr. 8, 1970; 39 FR 17304, May 15, 1974. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT COMPLIANCE

§ 52.390 Sample size.

(a) *General.* The sample size to determine compliance with requirements for size, percent head material, and quality factors shall be the sampling plans specified in the "Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products" (§§ 52.1-52.87).

(b) *Acceptance numbers.* The acceptance numbers for deviants specified in the sampling plans cited in paragraph (a) of this section do not apply to these standards.

§ 52.391 Lot acceptance for size.

A lot of frozen asparagus is considered as meeting the requirements for a specified size if the defects permitted and the AL values for the applicable defect classifications, specified in Table III, are not exceeded.

§ 52.392 Lot acceptance for "Percent Head Material" in the style of cut-spears.

The percent, by count, of heads is determined by averaging the percentage of heads in all of the sample units comprising the sample: *Provided*, That:

(a) When cut into units 1¼ inches or less in length no individual sample unit may contain less than 12 percent, by count, of heads; and

(b) When cut into units longer than 1¼ inches, no sample unit may contain less than 15 percent, by count, of heads.

§ 52.393 Lot acceptance for "Percent loose material".

The percent of loose material, by weight, is determined by averaging the percentage by weight of loose material in the total weight of all of the sample units comprising the sample.

[35 FR 5663, Apr. 8, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.394 Lot acceptance for quality.

A lot of frozen asparagus is considered as meeting the quality requirements of either U.S. Grade A or U.S. Grade B if:

(a) The product has a good flavor and odor; and

(b) The product is free of grit or silt that affects the appearance or edibility within the limits specified for either U.S. Grade A or U.S. Grade B; and

(c) The product complies with the limits specified for loose material for either U.S. Grade A or U.S. Grade B; and

(d) The defects permitted and the Al values for the applicable defect classifications, specified in Tables VII and VIII, are not exceeded.

[34 FR 5152, Mar. 13, 1969, as amended at 35 FR 5663, Apr. 8, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.395 Score sheet for frozen asparagus.

Defect Tally Sheet for Frozen Asparagus

Number, size, kind of container ....
Label statements ....
Container mark or identification:
    Packages ....
    Cases ....
Net weight ....
Style ....
Sizes of spears; tips styles ....
Head material (percent) ....

Quality factors	Defects							
	Sample unit				Sample unit			
	Minor	Major	Severe	Critical	Minor	Major	Severe	Critical
Color								
Uniformity of length								
Damage								
Harmless extraneous material								
Character								
Total defects—Each class								
Total defects—All classes: Minor, Major, Severe, Critical								
Size—Diameters								
Total defects—Each class								

Quality factors	Defects							
	Sample unit				Sample unit			
	Minor	Major	Severe	Critical	Minor	Major	Severe	Critical
Total defects—All classes: Minor, Major, Severe								
Flavor and odor: Good Objectionable								
Grit, silt, earthy material: Free Present/degree								
Grade								

[34 FR 5152, Mar. 13, 1969. Redesignated at 35 FR 5663, Apr. 8, 1970; 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Canned Dried Beans

SOURCE: 41 FR 32223, Aug. 2, 1976, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.411 Product description.

"Canned dried beans" is the product prepared from dry mature beans or peas used for canning; but not including soybeans, sweet peas, or early peas. Any safe and suitable ingredients permissible under the provisions of the Federal Food, Drug, and Cosmetic Act may be used. The product is prepared by washing, soaking, blanching, cooking, or other processing. It is packed in hermetically sealed containers and sufficiently processed by heat to assure preservation.

§ 52.412 Types.

(a) White beans.

(b) Lima beans.

(c) Red beans.

(d) Pinto beans.

(e) Pink beans.

(f) Garbanzos or chick-peas.

(g) Black beans.

(h) Yelloweye beans.

(i) Black-eye peas or field peas (Southern peas).

(j) Mixed beans (two or more varietal types of beans in any proportions).

(k) Beans of other colors or types (except soybeans, sweet peas, and early peas).

§ 52.413 Styles.

(a) "In tomato sauce" means packed with tomato pulp or a similar tomato product and any other safe and suitable ingredient(s). The sauce may be highly seasoned.

(b) "In sweetened sauce" means packed with nutritive carbohydrate sweetening ingredient(s) and any other safe and suitable ingredient(s). The sauce may be highly seasoned.

(c) "In brine" means packed in brine and any other safe and suitable ingredient(s).

§ 52.414 Grades.

(a) "U.S. Grade A" is the quality of canned dried beans that has the following attributes:

(1) Practically similar varietal characteristics (except "mixed" type);

(2) At least a reasonably good consistency for the styles of "in tomato sauce" and "in sweetened sauce";

(3) Practically free from defects;

(4) Good character;

(5) Good flavor;

(6) Scores at least 17 points for color; and

(7) Totals not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" is the quality of canned dried beans that has at least the following attributes:

(1) Reasonably similar varietal characteristics (except "mixed" type);

(2) Reasonably good consistency for the styles of "in tomato sauce" and "in sweetened sauce";

(3) Reasonably free from defects;

(4) Reasonably good character;

(5) Reasonably good flavor;

(6) Reasonably good color; and

(7) Totals not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned dried beans that fails to meet the requirements of U.S. Grade B.

§ 52.415 Sample unit size.

Compliance with requirements for factors of quality is based on a sample unit consisting of the entire contents of one container, irrespective of container size.

§ 52.416 Determining the grade.

(a) *General.* The factor of canned dried beans is determined by considering, in addition to the requirements of the respective grade, the following factors:

(1) *Factors not rated by score points.*

(i) Similar varietal characteristics;

(ii) Consistency; and

(iii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Absence of defects	40
Character	40
Total	100

(b) *Definitions*—(1) *Similar varietal characteristics.* (i) "Contrasting varieties" means dried beans of the same type or of other types that are of a noticeably different color, size, or shape from the dried beans of the predominating variety (such as red beans with white beans);

(ii) "Varieties that blend" means dried beans of the same type or of other types that are similar in color, size, or shape to the dried beans of the predominating variety (such as pea beans with small white beans);

(iii) "Practically similar varietal characteristics" means that the beans are practically alike in size, shape, color, general characteristics, and that there may be present not more than 0.5 percent, by weight, of contrasting varieties; and not more than 5 percent, by weight, of varieties that blend (not applicable to "mixed" type); and

(iv) "Reasonably similar varietal characteristics" means that the beans are reasonably alike in size, shape, color, general characteristics, and that there may be present not more than 1 percent, by weight, of contrasting varieties; and not more than 10 percent, by weight, of varieties that blend (not applicable to "mixed" type).

(2) *Consistency.* (i) "Reasonably good consistency" means that the sauce is reasonably smooth and may be slightly grainy or slightly lumpy. The product may have a thick consistency but is practically free from "matting" and when emptied on a flat surface may have practically no separation of liquid; or, the product may have a thin consistency with separation of liquid, but it shall not be watery (not applicable to "in brine" style). "Matting" means compaction to the extent that the beans cannot be removed from the container without causing damage or excessive mushiness.

(3) *Flavor.* (i) "Good flavor" means that the product has a good, normal flavor and odor, characteristic of the style of pack, and is free from objectionable flavors and objectionable odors of any kind; and

(ii) "Reasonably good flavor" means that the product may be lacking in good flavor and odor, but is characteristic of the style of pack, and is free from objectionable flavors and objectionable odors of any kind.

§ 52.417 Determining the rating of the factors which are scored.

The essential variations within each factor which is scored are so described that the value is determined for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.418 Color.

(a) "Good color" means that the beans have a color that is bright and reasonably uniform, typical of the type; and that the sauce or brine has a color typical of the style of pack. Canned dried beans that have a good color may be given a score of 18 to 20 points.

(b) "Reasonably good color" means that the beans have a color that is fairly uniform, typical of the type; may be dull but not off-color; and that the sauce or brine has a color typical of the style of pack. Canned dried beans that have a reasonably good color may be given a score of 16 or 17 points. Canned dried beans that score 16 points for color shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a partial limiting rule).

(c) "Substandard." Canned dried beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.419 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from extraneous vegetable material, loose skin, broken and mashed beans, and blemished beans; or any other defects that may affect the appearance or eating quality of the product.

(b) *Definitions.* (1) "Loose skin" means a skin or portions of a skin which have become separated wholly from the cotyledons;

(2) "Broken" means a cotyledon or portions of a cotyledon which have become separated; or a bean or portions of a bean with the skin or portions of the skin missing;

(3) "Mashed" means a bean that is crushed or flattened to the extent that the appearance is seriously affected;

(4) "Blemished" means a bean that is affected or damaged by any means to the extent that its appearance or eating quality is adversely affected;

(i) Slightly;

(ii) Materially;

(iii) Seriously; and

(5) "Extraneous vegetable material" means vegetable material common to the bean plant or other plants that is harmless upon eating and includes, but is not limited to, peas, lentils, cereal grains, and corn.

(c) "Practically free from defects" means that the canned dried beans comply with the allowances in Table I. Canned dried beans that are practically free from defects may be given a score of 36 to 40 points.

(d) "Reasonably free from defects" means that the canned dried beans comply with the allowances in Table II. Canned dried beans that are reasonably free from defects may be given a score of 32 to 35 points and shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a limiting rule).

(e) "Substandard." Canned dried beans that fail to meet the allowances for grade B may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—ALLOWANCES FOR DEFECTS IN CANNED DRIED BEANS—U.S. GRADE A

Defects	Maximum amount of defects permitted	
	Sample unit (percent of net weight)	Sample average
Loose skin, broken, and mashed.	5	
Total blemished (slightly, materially, and seriously).	3	
Materially blemished ...	2	
Seriously blemished	1	
Extraneous vegetable material.	([1])	1 piece per 80 oz net weight.

[1] No limit.

TABLE II—ALLOWANCES FOR DEFECTS IN CANNED DRIED BEANS—U.S. GRADE B

Defects	Maximum amount of defects permitted	
	Sample unit (percent of net weight)	Sample average
Loose skin, broken, and mashed.	10	
Total blemished (slightly, materially, and seriously).	6	
Materially blemished ...	4	
Seriously blemished	2	
Extraneous vegetable material.	([1])	1 piece per 20 oz net weight.

[1] No limit.

§ 52.420 Character.

(a) *General.* The factor of character refers to the degree of freedom from hard beans, mushy beans, beans with tough skins; and the overall texture of the product.

(b) "Good character" means that the beans have a good, typical texture, that may be slightly soft or slightly firm; and that the skins are tender. Canned dried beans that have a good character may be given a score of 36 to 40 points.

(c) "Reasonably good character" means that the beans have a reasonably good, typical texture, that the beans may be firm or soft and that the presence of hard or mushy beans does not materially affect the eating quality; and that the skins may be slightly tough. Canned dried beans that have a reasonably good character may be given a score of 32 to 35 points and shall not be graded above "*U.S. Grade B,*" regardless of the total score for the product (this is a limiting rule).

(d) "Substandard." Canned dried beans that fail to meet the requirements of grade B may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.421 Determining the grade of a lot.

The grade of a lot of canned dried beans covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.83).

§ 52.422 Score sheet for canned dried beans.

Container size..
Container code or identification..
Label..
Net weight..
Vacuum..
Type..
Style..

Factors		Score points	
Color....................	20	(A)	18–20
		(B)	[1] 16–17
		(SSTD)	[2] 0–15
Absence of defects.	40	(A)	36–40
		(B)	[2] 32–35
		(SSTD)	[2] 0–31
Character	40	(A)	36–40
		(B)	[2] 32–35
		(SSTD)	[2] 0–31
Total score........	100		

Consistency.. ([3])
Flavor..
Similar varietal characteristics.. ([4])
Grade..

[1] Indicates partial limiting rule.
[2] Indicates limiting rule.
[3] Not applicable for the style of "in brine."
[4] Not applicable for "mixed" type.

Subpart—United States Standards for Grades of Canned Green Beans and Canned Wax Beans

SOURCE: 26 FR 5555, June 22, 1961, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, STYLES, AND GRADES

§ 52.441 Identity.

(a) "Canned green beans" means canned green beans as defined in the definitions and standard of identity for canned green beans (21 CFR 155.120(a)), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(b) "Canned wax beans" means canned wax beans as defined in the definitions and standard of identity for canned wax beans (21 CFR 155.120(a)), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(c) "Canned beans" or "beans" as hereinafter referred to in this subpart means canned green beans or canned wax beans.

(d) "Unit" means an individual green bean or wax bean, or portion of either in canned beans.

§ 52.442 Styles of canned beans.

(a) "Whole" means canned beans that consist of whole pods, including pods which after removal of either or both ends are less than 2¾ inches in length or transversely cut pods not less than 2¾ inches in length and, except for "vertical pack" or asparagus style, are not arranged in any definite position in the container.

(b) "Whole vertical pack" means canned beans that are "whole" and are packed parallel to the sides of the container.

(c) "Whole asparagus style" means canned beans that are "whole" and consist of pods that are cut at both ends are of substantially equal lengths, and are packed parallel to the sides of the container.

(d) "Sliced lengthwise" or "French style" means canned beans consisting of pods that are sliced lengthwise.

(e) "Cut" or "cuts" means canned beans consisting of pods that are cut transversely into pieces less than 2¾ inches, but not less than ¾ inch, in length, and may contain shorter end pieces which result from cutting.

(f) "Short cut" or "short cuts" means canned beans consisting of pieces of pods of which not less than 75 percent are less than ¾ inch in length and not more than 1 percent are more than 1¼ inches in length.

(g) "Mixed" or "mixture" means a mixture of two or more of the following styles of canned beans: "whole"; "sliced lengthwise"; "cuts"; or "short cuts".

§ 52.443 Grades of canned beans.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned green beans or canned wax beans that possess similar varietal characteristics; possess a normal flavor and odor; are practically free from defects for reasons other than damaged by mechanical injury; possess a good character; and are of such quality with respect to clearness of liquor, uniformity of color, and absence of defects as to score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of canned green beans or canned wax beans that possess similar varietal characteristics; possess a normal flavor and odor; possess a reasonably uniform typical color, are reasonably free from defects; possess a reasonably good character; and are of such quality with respect to clearness of liquor as to score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of canned green beans or canned wax beans that possess similar varietal characteristics; possess a normal flavor and odor; possess a fairly good liquor; possess a fairly uniform typical color; are fairly free from defects; possess a fairly good character; and score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned beans that fail to meet the requirements of U.S. Grade C and may or may not be "Below Standard in Quality—Good Food—Not High Grade".

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.444 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned beans be filled with beans as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.445 Recommended drained weight.

The drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product since the drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of beans is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-inch ±3%, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. A sieve 8 inches in diameter is used for No. 2½ size cans (401 x 411) and smaller sizes, and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

§ 52.446 Compliance with recommended drained weights.

Compliance with the recommended drained weights for canned beans in Table I is determined by averaging the drained weights from all the containers in the sample which is representative of a specific lot and such lot is considered as meeting the recommendations if the following criteria are met:

(a) The average of the drained weights from all of the containers in the sample meets the recommended minimum drained weight for the applicable style;

(b) The drained weights from the containers which do not meet the recommended minimum drained weight are within the range of variability of good commercial practice.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED GREEN BEANS AND WAX BEANS

Container size or designation	Whole (Ounces)	Whole vertical pack; and whole asparagus style (Ounces)	Short cuts; and cuts, less than 1½ inches (Ounces)	Cuts—½ inches and longer (Ounces)	Mixed—Cuts and short cuts (Ounces)	Sliced lengthwise or French style (Ounces)
8 oz tall	4.0	4.6	4.5	4.1	4.5	4.1
8 oz glass	3.9	4.5	4.4	4.0	4.4	4.0
No. 1 (picnic)	5.6	6.1	6.0	5.7	6.0	5.7
No. 300	8.2	9.2	8.5	8.2	8.5	8.2
No. 300 glass	8.2	9.2	8.5	8.2	8.5	8.2
No. 1 tall	8.5	9.5	9.2	8.7	9.2	8.7
No. 303	8.5	9.5	9.2	8.7	9.2	8.7
No. 303 glass	9.0	10.0	9.7	9.2	9.7	9.2
No. 2	10.5	11.9	11.2	11.0	11.2	11.0
No. 2½	16.0	17.0	16.4	16.2	16.4	16.2
No. 2½ glass	15.8	16.8	16.2	16.0	16.2	16.0
No. 3 cylinder	26.6		27.3	27.0	27.3	27.0
No. 10	57.5		63.0	60.0	63.0	59.0

[26 FR 5555, June 22, 1961, as amended at 37 FR 587, Jan. 14, 1972. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

TYPES AND SIZES

§ 52.447 Types of canned beans.

The type of canned beans is not incorporated in the grades of the finished product, since the type of canned beans is not a factor of quality for the purpose of these grades. The type of canned beans is based upon the relationship of the width and thickness measurement and is described as "round-type" or "flat-type" as follows:

(a) "Round-type" are canned beans having a width not greater than 1½ times the thickness of the bean.

(b) "Flat-type" are canned beans having a width greater than 1½ times the thickness of the bean.

§ 52.448 Sizes of canned beans.

The size of beans is not a factor of quality of canned beans for the purpose of these grades. The size of a whole, cut, or short cut bean is determined by measuring the thickness at the shorter diameter of the bean transversely to the long axis at the thickest portion of the pod. The designations of the various sizes of round type and flat type beans are shown in Table No. II-A and II-B of this subpart.

TABLE II-A—SIZES OF ROUND-TYPE BEANS

Number designation	Word designation		Measurement of thickness in 64ths of one inch
	Whole beans	Cut or short cut beans	
Size 1	Tiny	Small	Less than 14½.
Size 2	Small	do	14½, but not including, 18½.
Size 3	Medium	do	18½, but not including, 21.
Size 4	Medium large	Medium	21, but not including, 24.
Size 5	Large	Large	24, but not including, 27.
Size 6	Extra large	Extra large	27 or more.

TABLE II-B—SIZES OF FLAT-TYPE BEANS

Number designation	Word designation		Measurement of thickness in 64ths of an inch
	Whole beans	Cut or short cut beans	
Size 2	Small	Small	Less than 14½.
Size 3	Medium	Medium	14½, but not including, 18½.
Size 4	Medium large	Medium large	18½, but not including, 21.
Size 5	Large	Large	21, but not including, 24.
Size 6	Extra large	Extra large	24 or more.

FACTORS OF QUALITY

§ 52.449 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.* (i) Flavor and odor: "Normal flavor and normal odor" means that the canned beans are free from objectionable flavors and objectionable odors of any kind.

(ii) Varietal characteristics.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Clearness of liquor	10
Color	15
Absence of defects	35
Character	40
Total score	100

§ 52.450 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "31 to 35 points" means 31, 32, 33, 34, or 35 points).

§ 52.451 Clearness of liquor.

(a) *(A) classification.* Canned beans that possess a practically clear liquor may be given a score of 9 or 10 points. "Practically clear liquor" means that the liquor may possess a slight tint of yellow-green to green color and that not more than a trace of suspended material and sediment is present.

(b) (*B*) *classification.* If the canned beans possess a reasonably clear liquor, a score of 8 points may be given. "Reasonably clear liquor" means that the liquor may be cloudy and contain a small quantity of sediment.

(c) (*C*) *classification.* If the canned beans possess a fairly good liquor, a score of 7 points may be given. "Fairly good liquor" means that the liquor may be dull in color, but not off color; may be cloudy; or may possess a noticeable accumulation of sediment.

(d) (*SStd*) *classification.* Canned beans that possess a liquor that is definitely off color for any reason, is excessively cloudy, or contains a seriously objectionable quantity of sediment may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.452 Color.

(a) (*A*) *classification.* Canned beans that possess a practically uniform bright typical color may be given a score of 14 or 15 points. "Practically uniform bright typical color" means that the canned beans possess a color that is bright and typical of very young and tender green beans or wax beans, as the case may be, of similar varietal characteristics with not more than 5 percent, by count, of units which vary markedly from this typical color.

(b) (*B*) *classification.* If the canned beans possess a reasonably uniform typical color, a score of 12 or 13 points may be given. "Reasonably uniform typical color" means that the canned beans possess a color that is typical of young and reasonably tender green beans or wax beans, as the case may be, of similar varietal characteristics with not more than 10 percent, by count, of units which vary markedly from this typical color.

(c) (*C*) *classification.* Canned beans that possess a fairly uniform typical color may be given a score of 10 or 11 points. Canned beans that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly uniform typical color" means that the canned beans possess a color that is typical of nearly mature and fairly tender green beans or wax beans, as the case may be, of similar varietal characteristics with not more than 15 percent, by count, of units which vary markedly from this typical color.

(d) (*SStd*) *classification.* Canned beans that are definitely off color or fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 9 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.453 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from blemished and seriously blemished units; from unstemmed units, detached stems, leaves, extraneous vegetable matter; or split units, loose seeds and pieces of seed, small pieces of pod, and ragged-cut units or units damaged by mechanical injury in the applicable styles; and any other defects not specifically defined which affect the appearance or edibility of the units or the product.

(b) *Definitions of defects or defective units.* (1) "Blemished" or "blemished unit" mean blemished by scars, pathological injury, insect injury, or other means in which the aggregate area affected exceeds the area of a circle ⅛ inch in diameter or the appearance or eating quality of the unit is materially affected.

(2) "Seriously blemished" or "seriously blemished unit" means blemished to such an extent that the appearance or eating quality of the unit is seriously affected.

(3) "Long stems" mean attached or detached stems which are longer than ½ inch.

(4) "Extraneous vegetable matter" means leaves and other similar vegetable matter that is harmless, and includes "detached stems", when so indicated.

(5) "Split unit" means a whole bean, cut, or short cut unit, that is split into two parts.

(6) "Small pieces of pods" means pieces of pods less than ½ inch in length.

(7) "Ragged-cut unit" means a section of a pod that has a very ragged edge, or a section of a pod that is partially cut that seriously affects the appearance of the pod.

(8) "Damaged by mechanical injury" means broken or damaged to such an extent that the appearance or eating quality of the unit is seriously affected.

(c) *(A) classification.* Canned beans that are practically free from defects may be given a score of 31 to 35 points. "Practically free from defects" means that:

(1) The limits for allowable defects or defective units in the applicable styles do not exceed the maximum limits for (A) classification in Table III of this subpart; and

(2) Notwithstanding the applicable allowances in Table III the defects or defective units (whether or not specifically defined), individually and collectively, do not materially affect the appearance or edibility of the product.

(d) *(B) classification.* If the canned beans are reasonably free from defects, a score of 28 to 30 points may be given. Canned beans that fall into this classification for reasons other than damage by mechanical injury shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule) "Reasonably free from defects" means that:

(1) The limits for allowable defects or defective units in the applicable styles do not exceed the maximum limits for (B) classification in Table III of this subpart; and

(2) Notwithstanding the applicable allowances in Table III the defects or defective units (whether or not specifically defined), individually and collectively, do not seriously affect the appearance or edibility of the product.

(e) *(C) classification.* If the canned beans are fairly free from defects, a score of 25 to 27 points may be given. Canned beans that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule) "Fairly free from defects" means that the limits for allowable defects or defective units in the applicable styles do not exceed the maximum limits for (C) classification in Table III of this subpart.

(f) *(SStd) classification.* Canned beans that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 24 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule); and may also be "Below Standard in Quality—Good Food—Not High Grade" for the following applicable reasons:

Excessive number very short pieces;
Excessive number blemished units;
Excessive number unstemmed units;
Excessive foreign material;
Excessive loose seeds and pieces of seeds.

TABLE III—MAXIMUM ALLOWANCES FOR DEFECTS OR DEFECTIVE UNITS IN CANNED GREEN OR CANNED WAX BEANS

	(A) Classification	(B) Classification	(C) Classification
All styles:			
Total—all defects other than loose seeds and seed pieces.	10% of drained weight	15% of drained weight	20% of drained weight.
Blemished; and Seriously blemished	2% total, but no more than 1%, by count, seriously.	4% total, but no more than 2%, by count, seriously.	8% total,[1] but no more than 4%, by count, seriously.
Unstemmed units and Detached stems.	4 total, but no more than 2 long stems, per 12 ozs. drained weight.	5 total, but no more than 3 long stems, per 12 ozs. drained weight.	Unstemmed units: 6 total, but no more than 4 long stems, per 12 ozs. drained weight.
Leaves and other extraneous vegetable matter.	1 piece per 12 ozs. drained weight.	2 pieces per 12 ozs. drained weight.	Including detached stems: 0.6 ozs. per 60 ozs. drained weight.[1]
All styles, except as indicated otherwise:			
Loose seeds and pieces (except in Sliced Lengthwise style).	3% of drained weight	4% of drained weight	5% of drained weight.[1]

TABLE III—MAXIMUM ALLOWANCES FOR DEFECTS OR DEFECTIVE UNITS IN CANNED GREEN OR CANNED WAX BEANS—Continued

	(A) Classification	(B) Classification	(C) Classification
Small pieces of pod (in cuts, and mixed—cut and short cut styles only):			
(a) 240 count or less per 12 ozs. drained weight.	40 pieces per 12 ozs. drained weight or	60 pieces per 12 ozs. drained weight or [1]	60 pieces per 12 ozs. drained weight or [1]
(b) More than 240 count per 12 ozs. drained weight.	15% by count of all units ...	25% by count of all units [1].	25% by count of all units.
Ragged-cut units; and/or damage by mechanical injury (except in Sliced Lengthwise style).	5 total per 12 ozs. drained weight.	10 total per 12 ozs. drained weight.	No limits (but included in total allowance of 20% of drained weight).

[1] Determined as outlined in the standards of quality of canned green beans (21 CFR 155.120(b)) and canned wax beans (21 CFR 155.120(b)) promulgated under the Federal Food, Drug, and Cosmetic Act.

§ 52.454 Character.

(a) *General.* The factor of character refers to the maturity as reflected in the degree of development of pods and seeds and to the tenderness of the pods; to the degree of sloughing of the epidermis; and to the appearance of the slices and portions thereof in "Sliced Lengthwise" style.

(b) *Definitions.* (1) "Trimmed pod" means any pod from which there has been trimmed off as far as the end of the space formerly occupied by seed, any portion of the pod from which seed has become separated.

(2) "Tough strings" means strings or pieces of string at least ½ inch in length which will support a ½ pound weight for not less than 5 seconds.

(3) "Fibrous material" means the properly prepared, dried cellulose material obtained from deseeded pods, including strings, broken or unbroken.

(c) (*A*) *classification.* Canned beans that possess a good character may be given a score of 36 to 40 points. "Good character" means that:

(1) The beans are very young and tender in that the units are full-fleshed for the variety, are tender, and are not fibrous;

(2) The seeds are in the early stages of maturity;

(3) Not more than 5 percent, by count, of the units may possess tough strings;

(4) The beans are not materially affected in appearance by sloughing of the epidermis; and

(5) The beans, in "Sliced Lengthwise" style, are well sliced.

(d) (*B*) *classification.* If the canned beans possess a reasonably good character, a score of 32 to 35 points may be given. Canned beans that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that:

(1) The beans are young and reasonably tender in that the units may have lost their fleshy structure to some extent and are practically free from fiber;

(2) The seeds may have passed the early stages of maturity and have not reached the late stages of maturity;

(3) Not more than 10 percent, by count, of the units may possess tough strings;

(4) The beans are not materially affected in appearance by sloughing of the epidermis; and

(5) The beans, in "Sliced Lengthwise" style, are reasonably well sliced.

(e) (*C*) *classification.* If the canned beans possess a fairly good character, a score of 28 to 31 points may be given. Canned beans that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule) "Fairly good character" means that:

(1) The beans may be nearly mature but are fairly tender in that the units may have lost their fleshy structure to a considerable extent;

(2) The beans are not seriously affected in appearance by sloughing of the epidermis;

(3) The trimmed pods contain not more than 25 percent, by weight, of seed and pieces of seed;[1]

(4) The deseeded pods contain not more than 0.15 percent, by weight, of fibrous material;[1] and

(5) Not more than 20 percent, by count, of the units may possess tough strings except that in case there are present units at least $^{27}/_{64}$ inch or more in diameter, there are not more than 12 strings or pieces of string in 12 ounces, drained weight, which will support a ½ pound weight for not less than 5 seconds;[1]

(f) *(SStd.) classification.* Canned beans that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule); and may also be "Below Standard in Quality—Good Food—Not High Grade", for the following applicable reasons:

Excessive seed and pieces of seed in trimmed pods;
Excessive fibrous material in deseeded pods; and
Excessive tough strings.

LOT INSPECTION AND CERTIFICATION

§ 52.455 Ascertaining the grade of a lot.

The grade of a lot of canned green beans or canned wax beans covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.456 Score sheet for canned green beans or canned wax beans.

Container size
Container code or marking
Label
Net weight (ounces)
Vacuum (inches)
Drained weight
Type (round or flat)
Style
Size

Factors		Score points	
Clearness of liquor	10	(A)	9-10
		(B)	8
		(C)	7
		(SStd)	[1] 0-6
Color	15	(A)	14-15
		(B)	12-13
		(C)	[1] 10-11
		(SStd)	[1] 0-9
Absence of defects	35	(A)	31-35
		(B)	[2] 28-30
		(C)	[1] 25-27
		(SStd)	[1] 0-24
Character	40	(A)	36-40
		(B)	[1] 32-35
		(C)	[1] 28-31
		(SStd)	[1] 0-27
Total score	100		

Grade
Normal flavor and odor

[1] Indicates limiting rule.
[2] Indicates partial limiting rule (i.e., does not apply t damage from mechanical injury, such as broken beans).

Subpart—United States Standards for Grades of Canned Lima Beans

SOURCE: 18 FR 7933, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, TYPES, AND GRADES

§ 52.471 Identity.

"Canned lima beans" means the canned product properly prepared from the clean, sound, succulent seed of the lima bean plant, as defined in the definitions and standard of identity for canned vegetables (21 CFR 155.200) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.472 Types of canned lima beans.

(a) "Thin-seeded," such as Henderson Bush and Thorogreen varieties;

(b) "Thick-seeded Baby Potato," such as Baby Potato, Baby Fordhook, and Evergreen varieties;

(c) "Thick-seeded," such as Fordhook variety.

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[1] Determined as outlined in the standards of quality of canned green beans (21 CFR 155.120(b)) and canned wax beans (21 CFR 155.120(b)) promulgated under the Federal Food, Drug, and Cosmetic Act.

§ 52.473 Grades of canned lima beans.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned lima beans that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a good color; that are practically free from defects; that possess a practically clear liquor; that possess a good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the canned lima beans may possess a reasonably good character and a fairly clear liquor if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of canned lima beans that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably clear liquor; that possess a reasonably good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That the canned lima beans may possess a fairly clear liquor if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned lima beans that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a fairly good color; that are fairly free from defects; that possess a fairly clear liquor; that possess a fairly good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned lima beans that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.474 Recommended fill of container.

The recommended fill of container for canned lima beans is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned lima beans be filled as full as practicable with beans without impairment of quality.

§ 52.475 Recommended minimum drained weight.

The minimum drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product, since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned lima beans is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter so as to distribute the product evenly, inclining the sieve to facilitate drainage and allow to drain for two minutes. The drained weight is the weight of the sieve and the lima beans less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2 size can (307 × 409) and smaller sizes, and a sieve 12 inches in diameter is used for containers larger than the No. 2 size can.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS (IN OUNCES) OF LIMA BEANS

Container designation	Container size			Drained weight
	Overall diameter (inches)	Overall height (inches)	Overflow capacity (fluid ounces)	
8 Z tall	$2\frac{11}{16}$	$3\frac{4}{16}$		$5\frac{1}{2}$
8 Z jar			8.2	$5\frac{1}{2}$
No. 1 (picnic)	$2\frac{11}{16}$	4		7
No. 1 tall	$3\frac{1}{16}$	$4\frac{11}{16}$		$10\frac{3}{4}$
No. 300	3	$4\frac{7}{16}$		$9\frac{3}{4}$
No. 303	$3\frac{3}{16}$	$4\frac{6}{16}$		11
No. 303 jar			17.0	11
No. 2	$3\frac{7}{16}$	$4\frac{9}{16}$		$13\frac{1}{2}$
No. 10	$6\frac{3}{16}$	7		72

SIZES

§ 52.476 Sizes of lima beans in canned lima beans.

The size of lima beans is not a factor of quality of canned lima beans for the purpose of these grades. The size of a lima bean is determined by measuring the greatest width through the center at right angles to the longitudinal axis of the bean. The designations of the various sizes of lima beans packed as canned beans are shown in Table No. II of this section.

TABLE NO. II—SIZES OF LIMA BEANS IN CANNED LIMA BEANS

Word designation	Size of lima beans (inches in width)
Midget	25/64 inch in width and smaller.
Tiny	Over 25/64 inch to and including 29/64 inch in width.
Small	Over 29/64 inch to and including 34/64 inch in width.
Medium	Over 34/64 inch to and including 38/64 inch in width.
Large	Larger than 38/64 inch in width.

FACTORS OF QUALITY

§ 52.477 Ascertaining the grade.

(a) The grade of canned lima beans is ascertained by considering, in conjunction with the other requirements of the respective grade, the respective ratings for the factors of color, clearness of liquor, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factor	Points
Color	35
Clearness of liquor	10
Absence of defects	25
Character	30
Total score	100

(c) "Normal flavor and normal odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.478 Ascertaining the rating of the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "8 to 10 points" means 8, 9, or 10 points).

§ 52.479 Color.

(a) *General.* (1) The color for all types of canned lima beans in this subpart is based on the predominating and characteristic color of the exterior surface of the canned lima bean when compared to the U.S.D.A. permanent plastic color standards for Canned Thin-Seeded Lima Beans.

(2) A set of these color standards is available for public inspection, and information in regard to procurement of sets may be obtained from the Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C., 20250.

(i) "Green" with respect to all types of canned lima beans in this subpart means that the color of the individual lima bean possesses as much or more green color than the "U.S.D.A. Color Standard for Canned Thin-Seeded Green Lima Beans".

(ii) "White" with respect to all types of canned lima beans in this subpart means that the color of the individual lima bean is lighter than the "U.S.D.A. Color Standard for Canned Thin-Seeded White Lima Beans".

(b) (*A*) *classification.* Canned lima beans that possess a good color may be given a score of 32 to 35 points. "Good color" means that the lima beans, regardless of type, possess a bright typical color and meet the following additional color requirements for the respective types:

(1) *Thin-seeded types; Thick-seeded Baby Potato type.* (i) Not less than 90 percent, by count, of the lima beans are "green" defined as aforesaid, and not more than 10 percent, by count, may be lighter in color: *Provided,* That not more than 1 percent, by count, of all the lima beans are white, or

(ii) Not less than 97 percent, by count, of the lima beans are "green," defined as aforesaid, and not more than 3 percent, by count, may be lighter in color or white lima beans.

(2) *Thick-seeded type.* Not less than 90 percent, by count, of the lima beans are "green," defined as aforesaid, and not more than 10 percent, by count, may be lighter in color: *Provided,*

That not more than 3 percent, by count, of all the lima beans are white.

(c) (*B*) *classification.* If the canned lima beans possess a reasonably good color, a score of 29 to 31 points may be given. Canned lima beans that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the lima beans, regardless of type, possess a typical color and meet the following additional requirements for the respective types:

(1) *Thin-seeded type; Thick-seeded Baby Potato type.* Not less than 50 percent, by count, of the lima beans are "green," defined as aforesaid, and not more than 50 percent, by count, may be lighter in color: *Provided,* That not more than 25 percent, by count, of all the lima beans are white.

(2) *Thick-seeded type.* Not less than 50 percent, by count, of the lima beans are "green," defined as aforesaid, and not more than 50 percent, by count, may be lighter in color: *Provided,* That not more than 25 percent, by count, of all the lima beans are white.

(d) (*C*) *classification.* Canned lima beans that possess a fairly good color may be given a score of 26 to 28 points. Canned lima beans that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the lima beans, regardless of type, possess a typical color and meet the following additional requirements for the respective types:

(1) *Thin-seeded type; Thick-seeded Baby Potato type.* Less than 50 percent, by count, of the lima beans are "green," defined as aforesaid, and all of the lima beans may be white.

(2) *Thick-seeded type.* Less than 50 percent, by count, of the lima beans are "green," defined as aforesaid, and all of the lima beans may be white.

(e) (*SStd*) *classification.* Canned lima beans that are definitely off color or fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 25 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 7933, Dec. 9, 1953, as amended at 25 FR 2005, Mar. 9, 1960. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.480 Clearness of liquor.

(a) (*A*) *classification.* Canned lima beans that possess a practically clear liquor may be given a score of 9 or 10 points. "Practically clear liquor" may be given a score of 9 or 10 points. "Practically clear liquor" means that the liquor may be slightly cloudy and that not more than a small amount of sediment is present.

(b) (*B*) *classification.* If the canned lima beans possess a reasonably clear liquor, a score of 7 or 8 points may be given. "Reasonably clear liquor" means that the liquor may be somewhat cloudy and may contain a considerable amount of sediment.

(c) (*C*) *classification.* Canned lima beans that possess a fairly clear liquor may be given a score of 5 or 6 points. "Fairly clear liquor" means that the liquor may be dull in color but not to the extent that the appearance is seriously affected, and may be rather viscous cream-like, or starchy.

(d) (*SStd*) *classification.* Canned lima beans that possess a liquor that is definitely off color for any reason or that contains an excessive amount of sediment may be given a score of 0 to 4 points and shall not be graded above Substandard, regardless of the total score for the product (this is limiting rule).

§ 52.481 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from extraneous vegetable matter, from loose skins, loose cotyledons, broken beans, sprouted beans, and from beans that show light discoloration or that are blemished or seriously blemished.

(1) "Extraneous vegetable matter" means pods or pieces of pods, leaves, stems, and other similar vegetable matter.

(2) "Broken bean" means a bean from which one-half or more of a cotyledon or the equivalent thereof has

become detached; or pieces of cotyledon aggregating the equivalent of an average size whole cotyledon.

(3) "Loose cotyledon" means a whole cotyledon which has become separated from the skin.

(4) "Loose skin" means a whole skin or portions of skin aggregating the equivalent of an average size whole skin which has become separated from the cotyledons.

(5) "Light discoloration" means light discoloration of the hilum or other light discoloration which slightly affects but does not materially affect the appearance of the bean.

(6) "Sprouted" means lima beans that show an external shoot protruding beyond the cotyledon or skin.

(7) "Blemished" means blemished by discoloration, pathological injury, insect injury, or blemished by other means, other than by light discoloration which is not considered blemished, to such an extent that the aggregate blemished area materially affects the appearance or eating quality of a bean or any detached piece of a bean.

(8) "Seriously blemished" means blemished to such an extent that the aggregate blemished area seriously affects the appearance or eating quality of a bean or any detached piece of a bean.

(b) (*A*) *classification.* Canned lima beans that are practically free from defects may be given a score of 22 to 25 points. "Practically free from defects" means that the aforesaid defects, individually or collectively, do not more than slightly affect the appearance or eating quality of the product. The following allowances provide a guide for scoring canned lima beans which are practically free from defects:

(1) For each 10 ounces drained weight of beans there may be present:

(i) 1 piece, or pieces, of extraneous vegetable matter having an aggregate area of 3/16 square inch (½" × ⅜") on one surface of the piece, or pieces;

(ii) 3 percent, by count, of loose skins;

(iii) 5 percent, by count, of broken beans and loose cotyledons;

(iv) 1 percent, by count, of sprouted beans; and

(v) 2 percent, by count, of blemished and seriously blemished beans, and of such 2 percent, not more than ¼ thereof or ½ of 1 percent, by count, of all the beans may be seriously blemished.

(c)(*B*) *classification.* If the canned lima beans are reasonably free from defects, a score of 20 or 21 points may be given. Canned lima beans that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the aforesaid defects, individually or collectively, do not materially affect the appearance or eating quality of the product. The following allowances provide a guide for scoring canned lima beans which are reasonably free from defects:

(1) For each 10 ounches drained weight of beans there may be present:

(i) 1 piece, or pieces, of extraneous vegetable matter having an aggregate area of more than 3/16 square inch but not more than ⅜ square inch (½" × ¾") on one surface of the piece, or pieces;

(ii) 5 percent, by count, of loose skins;

(iii) 10 percent, by count, of broken beans and loose cotyledons;

(iv) 4 percent, by count, of sprouted beans; and

(v) 3 percent, by count, of blemished and seriously blemished beans, and of such 3 percent, not more than ⅓ thereof or 1 percent by count, of all the beans may be seriously blemished.

(d)(*C*) *classification.* Canned lima beans that are fairly free from defects may be given a score of 18 or 19 points. Canned lima beans that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the aforesaid defects, individually or collectively, do not seriously affect the appearance or eating quality of the product. The following allowances provide a guide for scoring canned lima beans which are fairly free from defects:

(1) For each 10 ounces drained weight of beans there may be present:

(i) 1 piece, or pieces, of extraneous vegetable matter having an aggregate area of more than ⅜ square inch, but not more than ¾ square inch (½" × 1½") on one surface of the piece, or pieces;

(ii) 8 percent, by count, of loose skins;

(iii) 15 percent, by count, of broken beans and loose cotyledons;

(iv) 8 percent, by count, of sprouted beans; and

(v) 4 percent, by count, of blemished and seriously blemished beans, and of such 4 percent, not more than ½ thereof or 2 percent, by count, of all the beans may be seriously blemished.

(e) *(SStd) classification.* Canned lima beans that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.482 Character.

The factor of character refers to the tenderness and maturity of the product.

(a) *(A) classification.* Canned lima beans that possess a good character may be given a score of 27 to 30 points. "Good character" means that the lima beans are young and tender.

(b) *(B) classification.* If the canned lima beans possess a reasonably good character, a score of 24 to 26 points may be given. "Reasonably good character" means that the lima beans are reasonably young and reasonably tender.

(c) *(C) classification.* Canned lima beans that possess a fairly good character may be given a score of 21 to 23 points. Canned lima beans that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the lima beans may be nearly mature and possess a fairly tender texture, may be firm and mealy but not hard, or may be soft but not mushy.

(d) *(SStd) classification.* Canned lima beans that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.483 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.484 Score sheet for canned lima beans.

Size and kind of container
Container marks or identification
Label
Net weight (ounces)
Vacuum (inches)
Drained weight (ounces)
Type
Size
Color:
  Percent green
  Percent white

Factors		Score points	
Color	35	(A)	32-35
		(B)	[1] 29-31
		(C)	[1] 26-28
		(SStd.)	[1] 0-25
Clearness of liquor	10	(A)	9-10
		(B)	7-8
		(C)	5-6
		(SStd.)	[1] 0-4
Absence of defects	25	(A)	[1] 22-25
		(B)	[1] 20-21
		(C)	[1] 18-19
		(SStd.)	[1] 0-17
Character	30	(A)	27-30
		(B)	24-26
		(C)	[1] 21-23
		(SStd.)	[1] 0-20
Total score	100		

Grade
Normal flavor and odor

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[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Lima Beans

SOURCE: 20 FR 5051, July 15, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.501 Product description.

"Frozen lima beans" means the frozen product prepared from the clean, sound, succulent seed of the lima bean plant without soaking, by shelling, washing, blanching, and properly draining, and is then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

[22 FR 1707, Mar. 16, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.502 Types of frozen lima beans.

(a) "Thin-seeded," such as Henderson Bush and Thorogreen varieties.

(b) "Thick-seeded Baby Potato," such as Baby Potato, Baby Fordhook, and Evergreen.

(c) "Thick-seeded," such as Fordhook variety.

§ 52.503 Grades of frozen lima beans.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen lima beans that possess similar varietal characteristics; that possess a good flavor; that are tender; that possess a good color; that are practically free from defects; and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen lima beans that possess similar varietal characteristics; that possess a good flavor; that are reasonably tender; that possess a reasonably good color; that are reasonably free from defects; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen lima beans that possess similar varietal characteristics; that possess a fairly good flavor; that are fairly tender; that possess a fairly good color; that are fairly free from defects; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen lima beans that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FACTORS OF QUALITY

§ 52.504 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(1) *Factors not rated by score points.*
(i) Varietal characteristics.
(ii) Flavor.
(iii) Tenderness.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	60
Defects	40
Total score	100

(b) The scores for the factors of color and absence of defects are determined immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units. The evaluation of the factors of tenderness and flavor of frozen lima beans is made after thawing and after the product is cooked.

(c) "Good flavor" means that the product has a good, characteristic, normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(d) "Fairly good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.505 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "54 to 60 points" means 54, 55, 56, 57, 58, 59, or 60 points).

§ 52.506 Color.

(a) *General.* The color of frozen lima beans has reference to the color characteristic of the individual lima bean.

(1) "Green" means that not less than 50 percent of the surface area of the individual lima bean possesses as much or more green color than U.S.D.A. lima bean green color standard for frozen lima beans.

(2) "White" means that more than 50 percent of the surface area of the individual lima bean is lighter in color than U.S.D.A. lima bean white color standard for frozen lima beans.

(3) The U.S.D.A. frozen lima bean color standards conform to the I.C.I. and other color requirements as specified in Table No. I of this section.

TABLE I—COLOR REQUIREMENTS FOR U.S.D.A. COLOR STANDARDS FOR FROZEN LIMA BEANS

Color designation	Daylight directional reflectance (Y)	Chromaticity coordinates	
		(x)	(y)
U.S.D.A. lima bean green color standard	40.4	.3715	.457
U.S.D.A. lima bean white color standard	63.5	.3731	.4016

(4) Information regarding these color standards may be obtained by writing to the Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, U.S. Department of Agriculture, Washington, D.C., 20250.

(b) (*A*) *classification.* Frozen lima beans that possess a good color may be given a score of 54 to 60 points. "Good color" means that the lima beans, regardless of type, possess a bright typical color and meet the following additional color requirements for the respective types:

(1) *Thin-seeded type (with skins removed); Thick-seeded Baby Potato type (with skins on).* (i) Not less than 93 percent, by count, of the lima beans are "green" and not more than 7 percent, by count, may be lighter in color: *Provided,* That not more than 1 percent, by count, of all the lima beans are white, or

(ii) Not less than 97 percent, by count, of the lima beans are "green" and not more than 3 percent, by count, may be lighter in color or white lima beans.

(2) *Thick-seeded type (with skins on).* Not less than 85 percent, by count, of the lima beans are "green" and not more than 15 percent, by count, may be lighter in color: *Provided,* That not more than 1 percent, by count, of all the lima beans are white.

(c) (*B*) *classification.* If the frozen lima beans possess a reasonably good color, a score of 48 to 53 points may be given. Frozen lima beans that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the lima beans, regardless of type, possess a typical color and meet the following additional requirements for the respective types:

(1) *Thin-seeded type (with skins removed); Thick-seeded Baby Potato type (with skins on).* Not less than 65 percent, by count, of the lima beans are "green" and not more than 35 percent, by count, may be lighter in color or white beans.

(2) *Thick-seeded type (with skins on)* Not less than 60 percent, by count, of the lima beans are "green" and not more than 40 percent, by count, may be lighter in color: *Provided,* That not more than 5 percent, by count, of all the lima beans are white.

(d) (*C*) *classification.* If the frozen lima beans possess a fairly good color, a score of 42 to 47 points may be given. Frozen lima beans that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the lima beans, regardless of type, possess a typical color and meet the following additional requirements for the respective types:

(1) *Thin-seeded type (with skins removed); Thick-seeded Baby Potato type (with skins on).* Less than 65 percent by count, of the lima beans are "green" and all of the lima beans may be white.

(2) *Thick-seeded type (with skins on).* Less than 60 percent, by count, of the lima beans are "green": *Provided,* That not more than 20 percent, by count of all the lima beans are white.

(e) *(SStd.) classification.* Frozen lima beans that are definitely off color or fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 41 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.507 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, from pieces of beans, shriveled beans, sprouted beans, light discoloration, and from beans that are blemished or seriously blemished.

(1) "Harmless extraneous vegetable material" means:

(i) Predominantly flat or predominantly cylindrical, green, tender vegetable material, such as pieces of pods or leaves and stems of the lima bean plant; and

(ii) Predominantly spherical vegetable material, such as seeds from other plants.

(2) "Piece of bean" (broken bean) means:

(i) A whole bean from which one-half or more of a cotyledon or the equivalent thereof has become detached;

(ii) Two detached whole cotyledons;

(iii) Pieces of detached broken cotyledons aggregating the equivalent of one average size whole cotyledon; and

(iv) A whole detached skin or portions of detached skin aggregating the equivalent of an average size whole skin.

(3) "Shriveled" means lima beans that are materially wrinkled and are not of normal plumpness.

(4) "Sprouted" means lima beans that show an external shoot protruding prominently beyond the cotyledon or skin.

(5) "Light discoloration" means light discoloration of the hilum or other light discoloration which slightly affects but does not materially affect the appearance or eating quality of the bean.

(6) "Blemished" means blemished by discoloration or blemished by other means to the extent that the appearance or eating quality of the bean is materially affected.

(7) "Seriously blemished" means blemished to such an extent that the appearance or eating quality of the bean is seriously affected.

(b) *(A) classification.* Frozen lima beans that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that:

(1) There may be present:

(i) For each 10 ounces, net weight, one piece, or pieces, of predominantly flat, harmless extraneous vegetable material having an aggregate area of 3/16 square inch (½ inch by ⅜ inch) on one surface of the piece, or pieces, and one predominantly cylindrical piece, or pieces, of harmless extraneous vegetable material not exceeding ½ inch in length in the aggregate; or

(ii) For each 30 ounces, net weight, one predominantly spherical piece of harmless extraneous vegetable material measuring not more than ¼ inch in diameter.

(2) There may be present:

(i) 5 percent, by count, of pieces of beans; [1]

(ii) 1 percent, by count, of shriveled and sprouted beans;

(iii) 2 percent, by count, of blemished and seriously blemished beans, and of such 2 percent, not more than ¼ thereof or ½ of 1 percent, by count, of all the beans may be seriously blemished; and that

(3) The presence of harmless extraneous vegetable material, pieces of

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[1] The percent, by count, of pieces of beans in the sample is determined by dividing the total number of pieces of beans by the total number of beans and pieces of beans and multiplying the quotient by 100.

beans, shriveled and sprouted beans, light discoloration, and blemished and seriously blemished beans, individually or collectively, does not more than slightly affect the appearance or eating quality of the product.

(c) *(B) classification.* If the frozen lima beans are reasonably free from defects, a score of 32 to 35 points may be given. Frozen lima beans that fall into this classification on account of the presence of shriveled or sprouted beans and of blemished or seriously blemished beans, shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule). "Reasonably free from defects" means that:

(1) There may be present:

(i) For each 10 ounces, net weight, one piece, or pieces, of predominantly flat, harmless extraneous vegetable material having an aggregate area of ⅜ square inch (½ inch by ¾ inch) on one surface of the piece, or pieces, and one predominantly cylindrical piece, or pieces, of harmless extraneous vegetable material not exceeding ¾ inch in length in the aggregate; or

(ii) For each 30 ounces, net weight, two predominantly spherical pieces of harmless extraneous vegetable material measuring not more than ¼ inch in diameter.

(2) There may be present:

(i) 10 percent, by count, of pieces of beans;[1]

(ii) 4 percent, by count, of shriveled and sprouted beans;

(iii) 3 percent, by count, of blemished and seriously blemished beans, and of such 3 percent, not more than ⅓ thereof or 1 percent, by count, of all the beans may be seriously blemished; and that

(3) The presence of harmless extraneous vegetable material, pieces of beans, shriveled and sprouted beans, light discoloration, and blemished and seriously blemished beans, individually or collectively, does not materially affect the appearance or eating quality of the product.

(d) *(C) classification.* Frozen lima beans that are fairly free from defects may be given a score of 28 to 31 points. Frozen lima beans that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that:

(1) There may be present:

(i) For each 10 ounces, net weight, one piece, or pieces, or predominantly flat, harmless extraneous vegetable material having an aggregate area of ¾ square inch (½ inch or 1½ inches) on one surface of the piece, or pieces, and one predominantly cylindrical piece, or pieces, of harmless extraneous vegetable material not exceeding 1 inch in length in the aggregate; or

(ii) For each 30 ounces, net weight, three predominantly spherical pieces of harmless extraneous vegetable material measuring not more than ¼ inch in diameter.

(2) There may be present:

(i) 15 percent, by count, of pieces of beans;[1]

(ii) 8 percent, by count, of shriveled and sprouted beans;

(iii) 4 percent, by count, of blemished and seriously blemished beans, and of such 4 percent, not more than ½ thereof or 2 percent, by count, of all the beans may be seriously blemished; and that

(3) The presence of harmless extraneous vegetable material, pieces of beans, shriveled and sprouted beans, light discoloration, and blemished and seriously blemished beans, individually or collectively, does not seriously affect the appearance or eating quality of the product.

(e) *(SStd.) classification.* Frozen lima beans that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.508 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

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[1] See footnote on previous page.

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.509 Score sheet for frozen lima beans.

Size and kind of container
Container marks or identification
Label
Net weight (ounces)
Type
Size
Color:
  Percent green
  Percent white

Factors		Score points	
Color	60	(A)	54-60
		(B) [1]	48-53
		(C) [1]	42-47
		(SStd.)	[1] 0-41
Defects	40	(A)	36-40
		(B) [2]	32-35
		(C) [1]	28-31
		(SStd.)	0-27
Total score	100		

Grade
Flavor
Tenderness

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Beets

SOURCE: 18 FR 7937, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, STYLES, AND GRADES

§ 52.521 Identity.

"Canned beets" means canned beets as defined in the definitions and standards of identity for canned vegetables (21 CFR 155.200), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.522 Styles of canned beets.

(a) "Whole" or "whole beets" means canned beets consisting of whole beets that retain the approximate original conformation of the whole beet.

(b) "Slices" or "sliced beets" means canned beets consisting of slices of beets, irrespective of whether such slices are "corrugated," "fluted," "wavy," or "scalloped."

(c) "Quarters" or "quartered beets" means canned beets consisting of quarters of beets.

(d) "Dice" or "diced beets" means canned beets consisting of diced beets.

(e) "Julienne," "French style," or "shoestring" means canned beets consisting of strips of beets.

(f) "Cut" means canned beets consisting of units, irrespective of whether such units are "segmented" or "wedge-shaped," which are not uniform in size or shape or which do not conform to any of the foregoing styles.

(g) "Unit" means an individual beet or portion of a beet in canned beets.

§ 52.523 Grades of canned beets.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned beets that possess similar varietal characteristics; possess a normal flavor and odor; possess a good color; are practically free from defects; are tender; and possess such uniformity of size and shape as to score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned beets that possess similar varietal characteristics; possess a normal flavor and odor; possess a fairly good color; are fairly free from defects; are fairly tender; and possess such uniformity of size and shape as to score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned beets that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.524 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full as practicable with beets without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.525 Recommended minimum drained weight.

The minimum drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned beets is determined by emptying the contents of the container upon a U.S. Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage and allowing to drain for two minutes. The drained weight is the weight of the sieve and beets less the weight of the dry sieve A sieve 8 inches in diameter is used for the No. 2½ size can (401 × 411) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS, IN OUNCES, OF BEETS

Container size or designation	Whole [1]		Sliced [1]		Diced	Quartered cut	Julienne
	Size Nos. 1 to 3, inclusive	Size Nos. 4 to 6, inclusive	Small	Medium and large			
8-ounce tall	5½	5	5½	5	5½	5½	5¼
8-ounce jar	5½	5	5½	5	5½	5½	5¼
No. 1 picnic	6¾	6½	6¾	6½	7	7	6¾
No. 300	9½	9¼	9¾	9½	10	10	8¾
No. 303	10	9½	10¼	9¾	10½	10½	9
No. 303 jar	10	9½	10¼	9¾	10½	10½	9
No. 2	12½	12¼	12½	12	12¾	12½	11½
No. 2½	19½	19	19	18½	19	18½	18¼
No. 2½ jar	19¼	18¾	18¾	18¼	18¾	18¼	18
No. 10	67	66	67	66	70	68	64

[1] Mixed sizes to be based on drained weight for predominant size of individual units.

[20 FR 20, Jan. 4, 1955. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 50 FR 26141, June 24, 1985]

SIZES

§ 52.526 Sizes of beets in whole beets.

The size of any beet is determined by measuring the smallest diameter through the center transverse to the longitudinal axis of the beet. The word and number designations of the various sizes of beets in whole beets are shown in Table No. II of this section. Such table also specifies the count range per container for stated container sizes.

TABLE II—SIZES OF BEETS IN WHOLE BEETS

Word designation	Number designation	Count range per container					
		8-ounce tall	No. 1 Picnic	No. 303 can No. 303 jar	No. 2 can	No. 2½ can No. 2½ jar	No. 10 can
Tiny	Size 1	20 and over	25 and over	35 and over	44 and over	70 and over	250 and over.
Do	Size 2	14 to but not including 20.	18 to but not including 25.	25 to but not including 35.	1 to but not including 44.	50 to but not including 70.	175 to but not including 250.
Small	Size 3	10 to but not including 14.	12 to but not including 18.	18 to but not including 25.	22 to but not including 31.	35 to but not including 50.	125 to but not including 175.

TABLE II—SIZES OF BEETS IN WHOLE BEETS—Continued

Word designation	Number designation	Count range per container					
		8-ounce tall	No. 1 Picnic	No. 303 can No. 303 jar	No. 2 can	No. 2½ can No. 2½ jar	No. 10 can
Do	Size 4	5 to but not including 10	8 to but not including 12	10 to but not including 18	13 to but not including 22	20 to but not including 35	75 to but not including 125
Medium	Size 5		5 to but not including 8	7 to but not including 10	9 to but not including 13	15 to but not including 20	50 to but not including 75
Do	Size 6		Less than 5	Less than 7	Less than 9	Less than 15	Less than 50
Assorted sizes [1]							
Mixed sizes [2]							

[1] Assorted sizes is a combination of any 2 adjacent sizes.
[2] Mixed sizes is a combination of more than 2 adjacent sizes.

[18 FR 7937, Dec. 9, 1953, as amended at 20 FR 20, Jan. 4, 1955. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.527 Sizes of beet slices in sliced beets.

The size of any slice in sliced beets is determined by measuring the smallest diameter of the largest surface of the slice. The word designation of the various sizes of slices in sliced beets is shown in Table No. III of this section.

TABLE III

[Sizes of slices in sliced beets]

Word designation	Smallest diameter in inches
Small	Less than 2 inches.
Medium	From 2 inches up to but not including 2½ inches.
Large	Not less than 2½ inches.
Assorted sizes [1]	
Mixed sizes [2]	

[1] Assorted sizes is a combination of any two adjacent sizes.
[2] Mixed sizes is a combination of all designated sizes.

FACTORS OF QUALITY

§ 52.528 Ascertaining the grade.

(a) The grade of canned beets may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings of the factors of color, uniformity of size and shape, absence of defects, and texture.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	25
Uniformity of size and shape	15
Absence of defects	30
Texture	30
Total score	100

(c) "Normal flavor and normal odor" means that the canned beets are free from objectionable flavor and objectionable odors of any kind.

§ 52.529 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "12 to 15 points" means 12, 13, 14, or 15 points).

§ 52.530 Color.

(a) *(A) classification.* Canned beets that possess a good color may be given a score of 21 to 25 points. "Good color" means that the canned beets possess a color that is uniform, bright, and typical of canned beets produced from beets of similar varietal characteristics.

(b) *(C) classification.* If the canned beets possess a fairly good color, a score of 18 to 20 points may be given. Canned beets that fall into this classification shall not be graded above U.S.

Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned beets possess a color that is typical of canned beets produced from beets of similar varietal characteristics and such color may be variable or slightly dull.

(c) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.531 Uniformity of size and shape.

(a) (*A*) *classification.* Canned beets that are practically uniform in size and shape may be given a score of 12 to 15 points. "Practically uniform in size and shape" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The size of the individual beet is not more than 2¼ inches in diameter, measured as aforesaid; the beets may vary moderately in shape, and the diameter of the largest beet does not exceed the diameter of the smallest beet by more than 50 percent of the diameter of the smallest beet.

(2) *Quartered beets.* The beets from which the quarters have been prepared were of a size not more than 2½ inches in diameter, measured as aforesaid, and the weight of the largest quarter does not exceed the weight of the smallest quarter by more than 50 percent of the weight of the smallest quarter.

(3) *Sliced beets.* The individual slice is not more than ⁵⁄₁₆ inch in thickness when measured at the thickest portion; the size of each slice is not more than 3½ inches in diameter, measured as aforesaid, and the diameter of the largest slice does not exceed the diameter of the smallest slice by more than 50 percent of the diameter of the smallest slice.

(4) *Diced beets.* The units are practically uniform in size and shape with edges measuring not more than ⅜ inch; and the aggregate weight of the units which are smaller than one-half of a cube and of all large and irregular units does not exceed 15 percent of the weight of all units.

(5) *Julienne, French style, or shoestring.* The strips of beets are practically uniform in size and shape, with cross sections measuring not more than ³⁄₁₆ inch, and the aggregate weight of all strips less than 1½ inches in length does not exceed 25 percent of the weight of all the strips.

(6) *Cut.* The individual units weigh not less than ¼ ounce nor more than 2 ounces each and the largest unit weighs not more than four times the weight of the smallest unit. An occasional unit which is not representative of the general size of all the units is excluded in determining size variation.

(b) (*C*) *classification.* If the canned beets are fairly uniform in size and shape, a score of 8 to 11 points may be given. "Fairly uniform in size and shape" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The size of the individual beet is not more than 2½ inches in diameter, measured as aforesaid; the beets may vary considerably in shape, and the diameter of the largest beet is not more than twice the diameter of the smallest beet.

(2) *Quartered beets.* The beets from which the quarters have been cut were of a size not more than 3½ inches in diameter, measured as aforesaid, and the weight of the largest quarter is not more than twice the weight of the smallest quarter.

(3) *Sliced beets.* The individual slice is not more than ⅜ inch in thickness when measured at the thickest portion; the size of each slice is not more than 3½ inches in diameter, measured as aforesaid; and the diameter of the largest slice is not more than twice the diameter of the smallest slice.

(4) *Diced beets.* The units are fairly uniform in size and shape, with edges measuring not more than ½ inch; and the aggregate weight of all units which are smaller than one-half of a cube and all large and irregular units does not exceed 25 percent of the weight of all units.

(5) *Julienne, French style, or shoestring.* The strips of beets are fairly uniform in size and shape, with cross sections measuring not more than ³⁄₁₆

inch and the aggregate weight of all strips less than 1½ inches in length does not exceed 40 percent of the weight of all the strips.

(6) *Cut.* The individual units weigh not less than ⅛ ounce nor more than 3 ounces each and the largest unit weighs not more than twelve times the weight of the smallest unit. An occasional unit which is not representative of the general size of all the units is excluded in determining size variation.

(c) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 7 points and shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule).

§ 52.532 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from defective units. Defective units are slabs, units damaged by mechanical injury, units blemished by brown or black internal or external discoloration, pathological injury or insect injury and units blemished by other means.

(1) "Slab" means any portion of a whole beet obtained in slicing that possesses only one cut surface or cut surfaces of unequal areas varying in diameter more than ½ inch.

(2) "Damaged by mechanical injury" means crushed, broken, or cracked units, units with excessively frayed edges and surfaces, units with unpeeled areas, excessively trimmed units, or damaged by other means.

(3) "Blemished" means any blemish affecting an aggregate area greater than the area of a circle 3/16 inch in diameter or any blemish which seriously affects the appearance or eating quality of the unit.

(b) (*A*) *classification.* Canned beets that are practically free from defects may be given a score of 26 to 30 points. "Practically free from defects" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The aggregate weight of all defective units does not exceed 15 percent of the weight of all the units, and of such 15 percent not more than one-half thereof or one beet, whichever weighs more, may consist of blemished units.

(2) *Sliced, quartered, and cut beets.* The aggregate weight of all blemished units and units damaged by mechanical injury does not exceed 15 percent of the weight of all the units, and of such 15 percent not more than one-half thereof or one slice, quarter or cut, whichever weighs more, may consist of blemished units, and with respect to sliced beets not more than 10 percent of the weight of all the units may consist of units that are slabs.

(3) *Diced, Julienne, French style, or shoestring beets.* The aggregate weight of all defective units does not exceed 10 percent of the weight of all the units, and of such 10 percent not more than one-half thereof may consist of blemished units.

(c) (*C*) *classification.* Canned beets that are fairly free from defects may be given a score of 22 to 25 points. Canned beets that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The aggregate weight of all defective units does not exceed 30 percent of the weight of all the units, and of such 30 percent not more than one-half may consist of blemished units.

(2) *Sliced, quartered, and cut beets.* The aggregate weight of all blemished units and units damaged by mechanical injury does not exceed 30 percent of the weight of all the units, and of such 30 percent not more than one-half thereof may consist of blemished units, and with respect to sliced beets not more than 25 percent of the weight of all the units may consist of units that are slabs.

(3) *Diced, Julienne, French style, or shoestring beets.* The aggregate weight of all defective units does not exceed 25 percent of the weight of all the units and of such 25 percent not more than one-half thereof may consist of blemished units.

(d) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.533 Texture.

The factor of texture refers to the tenderness of the beets, and the degree of freedom from stringy or coarse fibers.

(a) (*A*) *classification.* Canned beets that possess a tender texture may be given a score of 26 to 30 points. "Tender texture" means that the beets are tender, not fibrous, and possess a uniform character.

(b) (*C*) *classification.* If the canned beets possess a fairly tender texture, a score of 22 to 25 points may be given. Canned beets that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender texture" means that the beets are fairly tender, may be variable in character but not tough or hard, and may possess a few stringy or coarse fibers.

(c) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.534 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.535 Score sheet for canned beets.

Container size ....

Container code or marking ....

Label ....

Net weight (ounces) ....

Vacuum (inches) ....

Drained weight (ounces) ....

Style ....

Size of whole beets (count) ....

Size of sliced beets (diameter) ....

Factors		Score points	
Color	25	(A)	21-25
		(C)	[1]18-20
		(SStd.)	[1]0-17
Uniformity of size and shape	15	(A)	12-15
		(C)	8-11
		(SStd.)	[1]0-7
Absence of defects	30	(A)	26-30
		(C)	[1]22-25
		(SStd.)	[1]0-21
Texture	30	(A)	26-30
		(C)	[1]22-25
		(SStd.)	[1]0-21
Total	100		

Normal flavor and odor ....

Grade ....

[1] Indicates limiting rule

Subpart—United States Standards for Grades of Canned Blackberries and Other Similar Berries Such as Boysenberries, Dewberries, and Loganberries

SOURCE: 18 FR 7940, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.551 Product description.

(a) "Canned blackberries" and other similar berries such as "boysenberries," "dewberries," "loganberries," and "youngberries" is the product represented as defined in the standards of identity (21 CFR 145.120) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[41 FR 15021, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.552 Grades of canned berries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned berries that possess similar varietal characteristics; that possess a good color; that are practically uniform in size; that are practically free from defects; that possess a good character; that possess a normal flavor and odor; and that for these factors which are scored in accordance with the scoring system outlined in this subpart, the total score is not less than 90 points: *Provided*, That the canned berries may possess a reasonably good color and may be reasonably uniform in size if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned berries that possess similar varietal characteristics; that possess a reasonably good color; that are reasonably uniform in size; that are reasonably free from defects; that possess a reasonably good character; that possess a normal flavor and odor and that for those factors which are scored in accordance with the scoring system outlined in this subpart, the total score is not less than 80 points: *Provided*, That the canned berries may be fairly uniform in size if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned berries that possess similar varietal characteristics; that possess a fairly good color; that may be fairly uniform in size; that are fairly free from defects; that possess a fairly good character; that possess a normal flavor and odor; and that when scored in accordance with the scoring system outlined in this subpart, the total score is not less than 70 points.

(d) "Substandard" is the quality of canned berries that fail to meet the requirements of U.S. Grade C or U.S. Standard.

LIQUID MEDIA, FILL OF CONTAINER, AND DRAINED WEIGHTS

§ 52.553 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned berries are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purpose of these grades. The recommended "cut-out" Brix measurement, as applicable, for the respective designations are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s)".	24° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)".	19° or more but less than 24°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)".	14° or more but less than 19°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)".	Less than 14°.
"In water"	Not applicable.
"In fruit juice(s) and water"	Do.
"In fruit juice(s)"	Do.

[18 FR 7940, Dec. 9, 1953, as amended at 41 FR 15021, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.554 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned berries be filled with berries as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.555 Recommended minimum drained weight.

The minimum drained weight recommendations are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned berries is determined by emptying the contents upon a United States Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch, ±3%, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes. The drained weight (or drained berries) is the weight of the sieve and the berries less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 x 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

§ 52.556 Compliance with recommended drained weights.

Compliance with the recommended drained weights for canned berries is determined by averaging the drained weights from all containers which are representative of a specific lot and such lot is considered as meeting the recommendations, if: The averaged drained weight from all the containers meets the recommended drained weight; one-half or more of the containers meet the recommended drained weight; and the drained weights from the containers which do not meet the recommended drained weight are within the range of variability for good commercial practices.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHT IN OUNCES OF CANNED BERRIES

Can size	Can dimensions (in inches)		Maximum capacity in water at 68°F (in ounces)	Blackberries		Other berries	
	Diameter	Height		Extra heavy and heavy sirup	Light sirup and water	Extra heavy and heavy sirup	Light sirup and water
8 ounce	2 11/16	3 4/16	8.65	4½	4¾	4⅛	4¼
No. 30	3 3/16	4 6/16	16.85	8½	9¼	7⅞	8¼
No. 23	3 7/16	4 9/16	20.50	11	12	9½	10
No. 10	6 3/16	7	109.45	62	66	55	60
No. 10 (heavy pack)[1]	6 3/16	7	109.45		74		70

[1] Canned berries in No. 10 containers (in water) may be certified with the additional statement "heavy pack," provided they meet a minimum drained weight requirement specified.

[18 FR 7940, Dec. 9, 1953, as amended at 21 FR 8309, Oct. 31, 1956. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

FACTORS OF QUALITY

§ 52.557 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size	20
Absence of defects	30
Character of fruit	30
Total score	100

(b) "Normal flavor and odor" means that the product is free from objectionable odors and objectionable flavors of any kind.

[21 FR 8309, Oct. 31, 1956. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.558 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "22 to 25 points" means 22, 23, 24, or 25 points).

§ 52.559 Color.

The factor of color refers to the color typical of the varietal group and to the intensity and brightness of such characteristic color.

(a) (*A*) *classification.* Canned berries that possess a good color may be given a score of 18 to 20 points. "Good color" means that the canned berries possess a color typical of well-ripened berries for the varietal type that have been properly processed and are practically uniform and bright in color.

(b) (*B*) *classification.* If the canned berries possess a reasonably good color, a score of 16 or 17 points may be given. "Reasonably good color" means that the canned berries possess a color typical of reasonably well-ripened berries for the varietal type that have been properly processed, and which color may be somewhat lacking in luster and may range in color from the lighter shades of reasonably well-ripened berries to the darker hues of well-ripened berries.

(c) (*C*) *classification.* If the canned berries possess a fairly good color, a score of 14 or 15 points may be allowed. Canned berries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned berries possess a color typical of fairly well-ripened berries for the varietal type that have been properly processed, and which color may be variable but is not off-color.

(d) (*SStd*) *classification.* Canned berries that fail to meet the requirements of paragraph (c) of this section, may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.560 Uniformity of size.

(a) *General.* The factor of uniformity of size refers to the uniformity of diameters of the canned berries. "Diameter" is the minimum diameter of the fruit of the berry measured at right angles to the stem axis that will pass through a rigid ring of the same diameter without using pressure.

(b) (*A*) *classification.* If the canned berries are practically uniform in size, a score of 18 to 20 points may be given. "Practically uniform in size" means that the variation in size of the berries does not materially affect the appearance of the product and that with respect to canned blackberries, not more than 15 percent, by count, of the blackberries are less than $^{20}/_{32}$ inch in diameter.

(c) (*B*) *classification.* If the canned berries are reasonably uniform in size, a score of 16 or 17 points may be given. "Reasonably uniform in size" means that the variation in size of the berries does not seriously affect the appearance of the product and that with respect to canned blackberries, not more than 15 percent, by count, of the blackberries are less than $^{18}/_{32}$ inch in diameter.

(d) (*C*) *classification.* If the canned berries are fairly uniform in size, a score of 14 or 15 points may be given. Canned berries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size" means that the canned berries may be variable in size and that with respect to canned blackberries more than 15 percent, by count, are less than $^{18}/_{32}$ inch in diameter.

§ 52.561 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous vegetable material and from damaged berries.

(1) "Harmless extraneous vegetable material" means any vegetable substance (including, but not limited to, leaves, stems, or portions of stems, whether or not attached, caps or portions of caps, whether or not attached).

(2) "Damaged" means any surface blemish or internal injury that materially affects the appearance or edibility of the berry (including, but not limited to, insect injury, pathological injury, hard berries, underdeveloped

berries, and abnormally developed berries).

(b) (*A*) *classification.* Canned berries that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that harmless extraneous vegetable material may be present that does not more than slightly affect the appearance or edibility of the product; and that not more than 4 percent, by count, of the canned berries may be damaged.

(c) (*B*) *classification.* If the canned berries are reasonably free from defects, a score of 24 to 26 points may be given. Canned berries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that harmless extraneous vegetable material may be present that does not more than materially affect the appearance or edibility of the product; and that not more than 8 percent, by count, of the canned berries may be damaged.

(d) (*C*) *classification.* Canned berries that are fairly free from defects may be given a score of 21 to 23 points. Canned berries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that harmless extraneous vegetable material may be present that does not seriously affect the appearance or edibility of the product; and that not more than 15 percent, by count, of the canned berries may be damaged.

(e) (*SStd*) *classification.* Canned berries which fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 7940, Dec. 9, 1953, as amended at 31 FR 8310, Oct. 31, 1956. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.562 Character of fruit.

(a) *General.* The factor of character refers to the degree of texture, and appearance as well as to the degree of disintegration of the berries.

(1) A berry is considered "crushed" if more than 50 percent of the drupelets are crushed, broken, or detached, or if the normal shape of the berry is otherwise materially affected or destroyed.

(b) (*A*) *classification.* Canned berries that possess a good character may be given a score of 27 to 30 points. "Good character" means that the berries possess a firm, tender texture characteristic of well-ripened berries for the varietal type and are practically intact; that the berries and accompanying liquor are practically free from detached seed cells; and that not more than 5 percent, by weight, of the blackberries may be crushed and not more than 10 percent, by weight, of dewberries, boysenberries, loganberries, or other similar types may be crushed.

(c) (*B*) *classification.* If the canned berries have a reasonably good character, a score of 24 to 26 points may be given. Canned berries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the berries may possess a reasonably tender texture characteristic of reasonably well-ripened berries to slightly over-ripe berries for the varietal type and are reasonably intact; that the berries and accompanying liquor are reasonably free from detached seed cells; and that not more than 10 percent by weight, of blackberries may be crushed and not more than 15 percent, by weight, of dewberries, boysenberries, loganberries, or other similar types may be crushed.

(d) (*C*) *classification.* Canned berries that possess a fairly good character may be given a score of 21 to 23 points. Canned berries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the berries may possess a fairly tender texture characteristic of fairly well-ripened berries to over-ripe berries for the varietal type and are fairly intact; and that not more than 20 percent, by weight, of the berries may be crushed.

(e) *(SStd) classification.* Canned berries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.563 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.564 Score sheet for canned berries.

Can size ....
Can mark ....
Label ....
Net weight (in ounces) ....
Vacuum readings (in inches) ....
Drained weight (in ounces) ....
Degree of sirup (Brix) ....

Factors			Score points
Color	20	(A)	18–20
		(B)	16–17
		(C)	[1]14–15
		(SStd.)	[1]0–13
Uniformity of size.	20	(A)	18–20
		(B)	16–17
		(C)	[1]14–15
Absence of defects.	30	(A)	27–30
		(B)	[1]24–26
		(C)	[1]21–23
		(SStd.)	[1]0–20
Character of fruit	30	(A)	27–30
		(B)	[1]24–26
		(C)	[1]21–23
		(SStd.)	[1]0–20
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Blueberries

SOURCE: 18 FR 7942, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.581 Product description.

(a) Canned blackberries is the product represented as defined in the Standards of Identity (21 CFR 145.120) for canned berries issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[41 FR 15021, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.582 Types of canned blueberries.

(a) Native (or wild) type.

(b) Cultivated type.

§ 52.583 Grades of canned blueberries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned blueberries that possess similar varietal characteristics; that possess a very good color; that are practically free from defects; that possess a good character; that possess a normal flavor and odor; and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned blueberries that possess similar varietal characteristics; that possess a good color; that are reasonably free from defects; that possess a reasonably good character; that possess a normal flavor and odor; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned blueberries that possess similar varietal characteristics; that possess a fairly good color; that are fairly free from defects; that possess a fairly good character; that possess a normal flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U.S. Grade D" or "Substandard" is the quality of canned blueberries that fail to meet the requirements of U.S. Grade C or U.S. Standard.

LIQUID MEDIA, FILL OF CONTAINER, AND DRAINED WEIGHTS

§ 52.584 Liquid media and Brix measurements.

(a) Brix measurement requirements for the liquid media in canned blueberries are not incorporated in the grades of the finished product since sirup, or any other liquid medium, as such, is not a factor of quality for the purpose of these grades. The designations of liquid packing media and Brix measurements, where applicable, are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s)".	25° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)".	20° or more but less than 25°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)".	15° or more but less than 20°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)".	Less than 15°.
"In water"	Not applicable.
"In fruit juice(s) and water."	Do.
"In fruit juice(s)"	Do.

[41 FR 15021, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.585 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned blueberries be filled with blueberries as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.586 Recommended minimum drained weight.

The minimum drained weight recommendations are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned blueberries is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-inch, ±3%, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage and allowing to drain for two minutes. The drained weight (or drained blueberries) is the weight of the sieve and the blueberries less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 × 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED BLUEBERRIES

Container designation	Container size (over-all dimensions)		Recommended minimum drained weights (ounces)
	Width (inches)	Height (inches)	
300 × 407	3	$4\frac{7}{16}$	7.5
No. 2	$3\frac{7}{16}$	$4\frac{9}{16}$	10.0
No. 10	$6\frac{3}{16}$	7	55.0

[18 FR 7942, Dec. 9, 1953, as amended at 24 FR 6709, Aug. 19, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

FACTORS OF QUALITY

§ 52.587 Ascertaining the grade.

(a) The grade of canned blueberries may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Absence of defects	40
Character	40
Total score	100

(c) "Normal flavor and odor" means that the product is free from objectionable odors and objectionable flavors of any kind.

§ 52.588 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.589 Color.

(a) *(A) classification.* Canned blueberries that possess a very good color may be given a score of 18 to 20 points. "Very good color" means a practically uniform, bright, dark blue-purple color typical of blueberries which had been properly processed from well-matured blueberries.

(b) *(B) classification.* If the canned blueberries possess a good color, a score of 16 or 17 points may be given. Canned blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Good color" means a reasonably uniform, dark blue-purple color typical of blueberries which had been properly processed from reasonably well-matured blueberries.

(c) *(C) classification.* If the canned blueberries possess a fairly good color, a score of 14 or 15 points may be given. Canned blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a blue-purple color typical of blueberries which had been properly processed and which are not off color for any reason.

(d) *(SStd) classification.* Canned blueberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.590 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material (such as leaves and large stems); from clusters; from cap stems; from undeveloped berries, or edible berries other than blueberries; and from berries damaged by insect, pathological, or any other injury.

(1) "Cap stems" are small stems which attach berries to the branch and means single cap stems or joined double cap stems with or without berries attached.

(2) A "cluster" means three or more joined cap stems with or without berries attached.

(3) "Undeveloped berries" are mummified berries with wrinkled or tough skins or which may be pathologically defective.

(b) *(A) classification.* Canned blueberries that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that the canned blueberries are reasonably free from cap stems and for each 20 ounces of net weight, or the equivalent thereof, there may be present:

(1) Not more than a total of 2 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed ½ square inch;

(2) Not more than 5 berries that are undeveloped or edible berries other than blueberries or berries that are damaged; and

(3) In native (or wild) type, not more than an average of 12 clusters in all containers comprising the sample, provided there are no more than 16 clusters in any single container; or

(4) In cultivated type, not more than 4 clusters.

(c) (*B*) *classification.* If the canned blueberries are reasonably free from defects, a score of 32 to 35 points may be given. Canned blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the canned blueberries are reasonably free from cap stems and for each 20 ounces of net weight, or the equivalent thereof, there may be present:

(1) Not more than a total of 4 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed ¾ square inch:

(2) Not more than 8 berries that are undeveloped or edible berries other than blueberries or berries that are damaged; and

(3) In Native (or wild) type, not more than an average of 20 clusters in all containers comprising the sample, provided there are no more than 28 clusters in any single container; or

(4) In Cultivated type, not more than 8 clusters.

(d) (*C*) *classification.* If the canned blueberries are fairly free from defects, a score of 28 to 31 points may be given. Canned blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the canned blueberries are fairly free from cap stems and for each 20 ounces of net weight, or the equivalent thereof, there may be present:

(1) Not more than a total of 6 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed 1 square inch;

(2) Not more than 10 berries that are undeveloped or edible berries other than blueberries or berries that are damaged; and

(3) In Native (or wild) type, not more than an average of 28 clusters in all containers comprising the sample, provided there are no more than 40 clusters in any single container; or

(4) In Cultivated type, not more than 12 clusters.

(e) (*SStd*) *classification.* Canned blueberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.591 Character.

(a) (*A*) *classification.* Canned blueberries that possess a good character may be given a score of 36 to 40 points. "Good character" means that the blueberries are reasonably firm, reasonably fleshy, practically whole, and practically intact with not more than 10 percent by weight of the drained blueberries that may be crushed, mushy, or broken berries.

(b) (*B*) *classification.* If the canned blueberries possess a reasonably good character, a score of 32 to 35 points may be given. Canned blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the blueberries may be lacking in firmness and fleshy texture but are reasonably whole and reasonably intact with not more than 15 percent by weight of the drained blueberries that may be crushed, mushy, or broken berries.

(c) (*C*) *classification.* If the canned blueberries possess a fairly good character, a score of 28 to 31 points may be given. Canned blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the blueberries are fairly whole and fairly intact with not more than 30 percent by weight of the drained blueberries that may be crushed, mushy, or broken berries.

(d) (*SStd*) *classification.* Canned blueberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regard-

less of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.592 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.593 Score sheet for canned blueberries.

Size and kind of container..

Container mark or identification..

Label..

Net weight (ounces)..

Vacuum (inches)..

Brix measurement..

Sirup designation (extra heavy, heavy, etc.)..

Type..

Factors		Score points	
Color	20	(A)	18-20
		(B)	[1]16-17
		(C)	[1]14-15
		(D)	[1]0-13
Absence of defects.	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(D)	[1]0-27
Character	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(D)	[1]0-27
Total score	100		

Flavor and odor..

Grade..

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Blueberries

SOURCE: 18 FR 7944, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.611 Product description.

Frozen blueberries are prepared from sound, properly ripened fresh fruit of the blueberry bush (Genus Vaccinium), including species or varieties often called "huckleberries," but not of the Genus Gaylussacia; are cleaned and stemmed; are properly washed; are packed with or without packing media; and are frozen and maintained at temperatures necessary for the preservation of the product.

[20 FR 3096, May 7, 1955. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.612 Types of frozen blueberries.

(a) Native (or wild) type.

(b) Cultivated type.

§ 52.613 Grades of frozen blueberries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen blueberries that possess similar varietal characteristics; that are practically free from defects; that possess a good character; that possess a normal flavor and odor; and are of such quality with respect to color as to score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen blueberries that possess similar varietal characteristics; that possess a good color; that are reasonably free from defects; that possess a reasonably good character; that possess a normal flavor and odor; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen blueberries that possess similar varietal characteristics; that possess a fairly good color; that are fairly free from defects; that possess a fairly good character; that possess a normal flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U.S. Grade D" or "Substandard" is the quality of frozen blueberries that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FACTORS OF QUALITY

§ 52.614 Ascertaining the grade.

(a) The grade of frozen blueberries may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Absence of defects	40
Character	40
Total score	100

(c) The scores for the factors of color, absence of defects, and character of frozen blueberries are determined when the product is sufficiently free from ice crystals to permit handling of the blueberries.

(d) "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.615 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.616 Color.

(a) (*A*) *classification.* Frozen blueberries that possess a very good color may be given a score of 18 to 20 points. "Very good color" means that the blueberries possess a practically uniform, bright, dark blue-purple color typical of properly matured berries for the variety and that there may be present not more than 5 percent by count of berries that possess a red-purple color. Frozen blueberries that are undercolored (not at least red-purple color) or that have a definite green cast are considered "green berries." (See § 52.617(a).)

(b) (*B*) *classification.* If the frozen blueberries possess a good color, a score of 16 or 17 points may be given. "Good color" means that the blueberries possess a reasonably uniform, dark blue-purple color typical of reasonably well-matured berries for the variety and that there may be present not more than 10 percent by count of berries that possess a red-purple color. Frozen blueberries that are under-colored (not at least red-purple color) or that have a definite green cast are considered "green berries." (See § 52.617(a).)

(c) (*C*) *classification.* If the frozen blueberries possess a fairly good color, a score of 14 or 15 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the blueberries may be moderately variable in color, but are not definitely dull or off color, and there may be present not more than 20 percent by count of berries that possess a red-purple color. Frozen blue berries that are undercolored (not at least red-purple color) or that have a definite green cast are considered "green berries." (See § 52.617(a).)

(d) (*SStd*) *classification.* Frozen blueberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.617 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material (such as leaves and large stems); from clusters; from cap stems; from green berries, undeveloped berries, or edible berries other than blueberries; and from berries damaged by insect, pathological, or any other injury.

(1) "Green berries" are blueberries that are undercolored and do not possess at least a red-purple color or that have a definite green cast, even though the over-all color of the berries may not be a true green color.

(2) "Cap stems" are small stems which attach berries to the branch and means single cap stems or jointed double cap stems with or without berries attached.

(3) A "cluster" means three or more joined cap stems with or without berries attached.

(4) "Undeveloped berries" are mummified berries with wrinkled or tough skins or which may be pathologically defective.

(b) (*A*) *classification*. Frozen blueberries that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that the frozen blueberries are reasonably free from cap stems and for each 16 ounces of net weight, or the equivalent thereof, there may be present:

(1) Not more than a total of 2 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed ½ square inch;

(2) Not more than a total of 10 berries that are green or undeveloped or edible berries other than blueberries or berries that are damaged, provided not more than 5 berries are undeveloped or edible berries other than blueberries or berries that are damaged; and

(3) In Native (or wild) type, not more than an average of 12 clusters in all samples or containers comprising the sample, provided there are no more than 16 clusters in any single sample or in any single container; or

(4) In Cultivated type, not more than 4 clusters.

(c) (*B*) *classification*. If the frozen blueberries are reasonably free from defects, a score of 32 to 35 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the frozen blueberries are reasonably free from cap stems and for each 16 ounces of net weight, or the equivalent thereof, there may be present:

(1) Not more than a total of 4 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed ¾ square inch;

(2) Not more than a total of 16 berries that are green or undeveloped or edible berries other than blueberries or berries that are damaged, provided not more than 8 berries are undeveloped or edible berries other than blueberries or berries that are damaged; and

(3) In Native (or wild) type, not more than an average of 20 clusters in all samples or containers comprising the sample, provided there are no more than 28 clusters in any single sample or in any single container; or

(4) In Cultivated type, not more than 8 clusters.

(d) (*C*) *classification*. If the frozen blueberries are fairly free from defects, a score of 28 to 31 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the frozen blueberries are fairly free from cap stems and for each 16 ounces of net weight, or the equivalent thereof, there may be present:

(1) Not more than a total of 6 whole leaves or large stems, provided such whole leaves and any other portions of leafy material do not exceed 1 square inch;

(2) Not more than a total of 20 berries that are green or undeveloped or edible berries other than blueberries or berries that are damaged, provided not more than 10 berries are undeveloped or edible berries other than blueberries or berries that are damaged; and

(3) In Native (or wild) type, not more than an average of 28 clusters in all samples or containers comprising the sample, provided there are not more than 40 clusters in any single sample or in any single container; or

(4) In Cultivated type, not more than 12 clusters.

(e) *(SStd) classification.* Frozen blueberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.618 Character.

(a) *(A) classification.* Frozen blueberries that possess a good character may be given a score of 36 to 40 points "Good character" means that the blueberries are reasonably firm, reasonably fleshy, practically whole, and practically intact with not more than 6 percent by weight of berries that may be crushed, mushy, or broken.

(b) *(B) classification.* If the frozen blueberries possess a reasonably good character, a score of 32 to 35 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the blueberries may be lacking in firmness and fleshy texture but are reasonably whole and reasonably intact with not more than 10 percent by weight of berries that may be crushed, mushy, or broken.

(c) *(C) classification.* If the frozen blueberries possess a fairly good character, a score of 28 to 31 points may be given. Frozen blueberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the blueberries are fairly whole and fairly intact with not more than 20 percent by weight of berries that may be crushed, mushy, or broken.

(d) *(SStd) classification.* Frozen blueberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.619 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.620 Score sheet for frozen blueberries.

Size and kind of container

Container mark or identification

Label (style of pack—Ratio of fruit to sugar, etc., if shown)

Net weight (ounces)

Type

Factors		Score points	
Color	20	(A)	18-20
		(B)	16-17
		(C)	[1]14-15
		(D)	[1]0-13
Absence of defects	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(D)	[1]0-27
Character	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(D)	[1]0-27
Total score	100		

Flavor and odor

Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Broccoli

SOURCE: 45 FR 4340, Jan. 22, 1980, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.631 Product description.

"Frozen broccoli" is the product prepared from the fresh, clean, sound stalks or shoots of the broccoli plant (Brassica oleracea [Italica group]) by trimming, washing, blanching, sorting, and properly draining. The product is frozen in accordance with good commercial practice and maintained at temperatures necessary for its preservation.

§ 52.632 Styles of frozen broccoli.

(a) "Spears" or "stalks" mean the head and adjoining portions of the stem, with or without attached leaves, which may range in length from 9 cm (3.5 in) to 15 cm (5.9 in). The spears or stalks may be cut longitudinally.

(b) "Short spears" or "florets" mean the head and adjoining portions of the stem, with or without attached leaves, which may range in length from 2.5 cm. (1 in) to 9 cm (3.5 in). Each short spear or floret must weigh more than 6 g (0.2 oz). The short spears or florets may be cut longitudinally.

(c) "Cut" means spears or short spears cut into portions which may range in length from 2 cm (0.8 in) to 5 cm (2 in). Head material should be at least 62.5 g (2.2 oz) per 250 g (8.8 oz) and leaf material should not be more than 62.5 g (2.2 oz) per 250 g (8.8 oz).

(d) "Chopped" means spears or short spears cut into portions which are less than 2 cm (0.8 in) in length. Head material should be at least 12.5 g (0.4 oz) per 50 g (1.8 oz) and leaf material should not be more than 12.5 g (0.4 oz) per 50 g (1.8 oz).

(e) "Pieces" or "random cut pieces" mean cut or chopped portions of spears or short spears or other units which do not meet the requirements for "cut" or "chopped" styles.

§ 52.633 Classification of style defectives.

For the purposes of determining compliance with style requirements, each nonconforming unit is considered as either a minor or major defective. Each "X" in table I represents "one (1) defective."

TABLE I—CLASSIFICATION OF STYLE DEFECTIVES

Style	Defectives		Minor	Major
	Longer than—	Shorter than—		
Spears or stalks (each spear)	15.5 cm (6.1 in)	8.5 cm (3.3 in)	X	
Short spears or florets (each spear)	9.5 cm (3.7 in)	2.0 cm (0.8 in)	X	
Cut (each 5 g)[1]	5.0 cm (2.0 in)			X
		1.5 cm (0.6 in)	X	
Chopped (each 2.5 g)[1]	2.0 cm (0.8 in)		X	

[1] Leaf material is not considered in the classification of style defectives.

§ 52.634 Tolerances for style defectives.

Defective units for style shall not exceed the Acceptable Quality Levels (AQL) in table II, table III or table IV, as applicable for the style. An insignificant weight increment of style defectives, limited to the first weight increment, shall not be considered.

TABLE II—SPEARS (OR STALKS) AND SHORT SPEARS (OR FLORETS)

	Minor
AQL[1]	10.0

[1] AQL expressed as percent defective.

TABLE III—CUT

	Minor	Major
AQL[1]	10.0	6.5

[1] AQL expressed as percent defective (50-5 g increments in 250 g).

TABLE IV—CHOPPED

	Minor
AQL[1]	8.5

[1] AQL expressed as percent defective (100-2.5 g increments in 250 g).

§ 52.635 Definitions of terms.

(a) Terms applicable to all styles of frozen broccoli:

(1) *Acceptable quality level* (*AQL*). The maximum percent of defective units, or the maximum number of de-

fects per hundred units of that product, that, for the purpose of acceptance sampling can be considered satisfactory as a process average.

(2) *Blemished.* A unit of broccoli that is blemished by pathological injury, hollow stems, pithy stems, insect injury, discolored, or by other means such as, but not limited to, small orange or yellowish-orange buds and olive-green petiole, to the extent that the appearance or eating quality is affected: (i) Slightly; (ii) materially; or (iii) seriously.

(3) *Defect (or defective).* Any nonconformance of a unit(s) of product from a specified requirement of a single characteristic.

(4) *Development*—(i) *Reasonably well developed.* The individual buds are not more than moderately enlarged and practically none of the individual buds are in the flowering stage.

(ii) *Poorly developed.* The individual buds are in the flowering stage or are more than moderately enlarged with or without reaching the flowering stage.

(5) *Extraneous vegetable material (EVM)*—(i) *Edible.* Tender, green blades of grass or weeds or leaves which are harmless.

(ii) *Inedible.* Coarse blades of grass or weeds or leaves which may or may not be tender or green and which are harmless.

(6) *Fiber.* Tough or woody fiber that has developed near the outside portion of the broccoli stem.

(7) *Flavor and odor*—(i) *Good flavor and odor.* The product has a good characteristic flavor and odor but is free from objectionable flavors or objectionable odors of any kind.

(ii) *Fairly good flavor and odor.* The product may be lacking in good flavor and odor but is free from objectionable flavors or objectionable odors of any kind.

(8) *Sample unit.* The amount of product specified to be used for inspection. It may be:

(i) The entire contents of a container; or

(ii) A portion of the contents of a container; or

(iii) A combination of the entire contents of two or more containers; or

(iv) A portion of unpacked product.

(9) *Unit.* Any individual portion of broccoli other than loose leaves or individual buds.

(b) Terms applicable to spears and short spears only;

(1) *Broken.* Detached portions, other than loose leaves or portions thereof, which weigh more than 6 g (0.2 oz) and are definitely not intact units.

(2) *Color (individual unit)*—(i) *Good color.* The outside of the stalk is a bright, distinct green. The top of the head is a bright, distinct green and may show a slight purplish cast. The color may also include lighter colored areas on the outside of the head which is typical of young and tender broccoli.

(ii) *Reasonably good color.* The outside of the stalk may be dull and may possess a slight brownish, yellowish, or grayish cast. The head may be dull and possess a slight brownish, grayish, or yellowish cast and yellow buds due to flowering that do not seriously affect the overall brightness.

(iii) *Poor color.* The presence of yellow buds due to flowering, or any brownish, grayish, or yellowish casts that seriously affect the overall brightness.

(3) *Damage.* The head of the spear is damaged by mechanical injury, other than "broken," to the extent that the appearance or eating quality is materially affected.

(4) *Detached fragments.* Any small piece or detached portion other than loose leaves or portions thereof, which weighs 6 g (0.2 oz) or less.

(5) *Development*—(i) *Well developed.* (A) The spreading of the branching bud clusters which comprise the head of the unit does not materially affect the appearance of the unit; and

(B) The broccoli is in the early stage of maturity such that the individual buds and the immediate stems supporting the individual buds form a compact bud cluster.

(ii) *Reasonably well developed.* (A) The spreading of the branching bud clusters which comprise the head of the unit does not seriously affect the appearance of the unit; and

(B) The broccoli is in the intermediate stage of maturity such that the individual buds and the immediate stems supporting the individual buds form a reasonably compact bud cluster.

(iii) *Poorly developed.* (A) The branching bud clusters which comprise the head of the unit may be spread to the extent that the appearance of the unit is seriously affected; and

(B) The broccoli is in the advanced stage of maturity such that the individual buds and the immediate stems supporting the individual buds form a loosely structured bud cluster.

(6) *Diameter of a spear.* The greatest dimension at the right angle to the longitudinal axis 2.5 cm (1 in) from the base end.

(7) *Loose leaves or pieces of leaves.* Broccoli leaves or pieces of leaves not attached to a unit.

(8) *Trim*—(i) *Well trimmed.* The appearance of the unit is not materially affected by the presence of attached leaves or pieces of leaves and not more than slightly affected by ragged or partial removal of leaves or small side shoots, or by cutting of the stem.

(ii) *Reasonably well trimmed.* The appearance of the unit is not seriously affected by the presence of attached leaves or pieces of leaves and not materially affected by ragged or partial removal of leaves or small side shoots, or by cutting of the stem.

(iii) *Poorly trimmed.* The appearance of the unit is seriously affected by the presence of attached leaves or pieces of leaves, ragged or partial removal of leaves or small side shoots, or by cutting of the stem.

(c) Terms applicable to cut and chopped broccoli only:

(1) *Head material.* The buds or bud clusters whether or not attached to a portion of a spear and includes the fine stem material by which the buds or bud clusters are attached to the main stem.

(2) *Leaf material.* Any portion of a leaf not attached to a portion of a spear.

§ 52.636 Recommended sample unit sizes.

(a) *For head material and leaf material.* (1) Cut style—250 g (8.8 oz). (2) Chopped style—50 g (1.8 oz).

(b) *For style and quality factors.* (1) Spears and short spears—50 units. (2) Cut, chopped, and pieces—250 g (8.8 oz).

(c) *Associated material.* (1) Broken, crushed, or similarly damaged portions of units of product in the styles of spears and short spears are to be reassembled and included in the count as whole units.

(2) Head and leaf material in the styles of cut and chopped, loose leaves or pieces in the styles of spears and short spears, and extraneous vegetable material in all product styles are part of the standard sample unit size. They are not included in the count of spears and short spears but are included in the weight of cut, pieces, and chopped broccoli. Such pieces and other extraneous vegetable material are considered part of the sample unit.

(i) When they are in a container whose entire contents are included in the sample unit;

(ii) When they are in the last of several containers included in the sample unit and 50 percent or more of the contents are required for the sample unit. None of the pieces and EVM in the last of several containers is considered part of the sample unit when less than 50 percent of its contents are required for the sample unit; and

(iii) When they are commingled with the product required for the sample unit and such product is taken from but is not the entire contents of a single container.

§ 52.637 Grades.

(a) "U.S. Grade A" is the quality of frozen broccoli that:

(1) Meets the following prerequisites in which the broccoli:

(i) Has similar varietal characteristics;

(ii) Has a good flavor and odor;

(iii) Is practically free from grit and silt;

(iv) Has a good overall brightness; and

(v) In the styles of cut, chopped, and pieces, the individual buds are at least reasonably well developed.

(2) Is within the limits for defects as classified in Table V and specified in Tables VI, VII, or VIII, as applicable for the style.

(b) "U.S. Grade B" is the quality of frozen broccoli that:

(1) Meets the following prerequisites in which the broccoli:

(i) Has similar varietal characteristics;

(ii) Has at least a fairly good flavor and odor;

(iii) Has no more than a trace of grit and silt;

(iv) Has at least a reasonably good overall brightness which may be slightly dull; and

(v) In the styles of cut, chopped, and pieces, the individual buds may be poorly developed if they do not materially affect the appearance of the product.

(2) Is within the limits for defects as classified in Table V and specified in Tables VI, VII, or VIII, as applicable for the style.

(c) Substandard is the quality of frozen broccoli that fails to meet the requirements of U.S. Grade B.

§ 52.638 Factors of quality.

The grade of frozen broccoli is based on compliance with requirements for the following quality factors:

(a) Prerequisite quality factors: (1) Similar varietal characteristics (all styles); (2) flavor and odor (all styles); (3) freedom from grit and silt (all styles); (4) overall brightness (all styles); and (5) development (cut, chopped, and pieces only).

(b) Classified quality factors: (1) Spears and short spears: (i) Color (individual unit); (ii) uniformity of size; (iii) detached fragments; (iv) loose leaves or pieces of leaves; (v) broken; (vi) damage; (vii) blemish; (viii) trim; (ix) development; (x) fiber; and (xi) extraneous vegetable material.

(2) Cut, chopped, and pieces: (i) Blemish; (ii) fiber; and (iii) extraneous vegetable material.

§ 52.639 Classification of defects.

Defects are classified as "minor," "major," "severe," or "critical." Each X in Table V represents "one (1) defect."

TABLE V—CLASSIFICATION OF DEFECTS

Quality factor	Defect	Classification			
		Minor	Major	Severe	Critical
	Spears				
Color (individual unit)	Reasonably good color in grade A only (each spear)		X		
	Poor color in grades A and B (each spear)			X	
Uniformity of size	Length variation is greater than 5 cm (each spear)		X		
	Diameter variation is greater than 2 cm (each spear)	X			
Detached fragments	Each 28 g increment		X		
Loose leaves and pieces of leaves.	Each 14 g increment	X			
Broken spear	Each spear	X			
Damaged spear	Each spear	X			
Blemished spear	Slightly (each spear)	X			
	Materially (each spear)		X		
	Seriously (each spear)			X	
Trim	Reasonably well trimmed in grade A only (each spear)	X			
	Poorly trimmed:				
	In grade A only (each spear)		X		
	In grade B only (each spear)	X			
Development	Reasonably well developed in grade A only (each spear).	X			
	Poorly developed in grades A and B (each spear)		X		
Fiber	Nonwoody (each spear)		X		
	Woody (each spear)			X	
Extraneous vegetable material.	Edible (each piece)			X	
	Inedible (each piece)				X.

TABLE V—CLASSIFICATION OF DEFECTS—Continued

Quality factor	Defect	Classification			
		Minor	Major	Severe	Critical
	Short Spears				
Color (individual unit)	Reasonably good color in grade A only (each spear)		X		
	Poor color in grades A and B (each spear)			X	
Uniformity of size	Largest unit is more than 4 times heavier than the smallest unit (each spear).	X			
Detached fragments	Each 28 g increment		X		
Loose leaves and pieces of leaves.	Each 14 g increment	X			
Broken spear	Each spear	X			
Damaged spear	Each spear	X			
Blemished spear	Slightly (each spear)	X			
	Materially (each spear)		X		
	Seriously (each spear)			X	
Trim	Reasonably well trimmed in grade A only (each spear)	X			
	Poorly trimmed:				
	In grade A only (each spear)		X		
	In grade B only (each spear)	X			
Development	Reasonably well developed in grade A only (each spear).	X			
	Poorly developed in grades A and B (each spear)		X		
Fiber	Nonwoody (each spear)		X		
	Woody (each spear)			X	
Extraneous vegetable material.	Edible (each piece)			X	
	Inedible (each piece)				X.
	Cut and Pieces				
Blemished	Slightly (each 5 g increment)	X			
	Materially (each 5 g increment)		X		
	Seriously (each 5 g increment)			X	
Fiber	Nonwoody (each 5 g increment)		X		
	Woody (each 5 g increment)			X	
Extraneous vegetable material.	Edible (each 2.5 cm increment)			X	
	Inedible (each 2.5 cm increment)				X.
	Chopped				
Blemished	Slightly (each 2.5 g increment)	X			
	Materially (each 2.5 g increment)		X		
	Seriously (each 2.5 g increment)			X	
Fiber	Nonwoody (each 2.5 g increment)		X		
	Woody (each 2.5 g increment)			X	
Extraneous vegetable material.	Edible (each 2.5 cm increment)			X	
	Inedible (each 2.5 cm increment)				X.

§ 52.640 Tolerances for defects.

An insignificant weight increment of defects limited to the first weight increment shall not be considered.

TABLE VI—SPEARS AND SHORT SPEARS

	Total [1]	Major	Severe	Critical
Grade A: AQL [2]	20.0	6.5	0.65	0.25
Grade B: AQL [2]	25.0	10.0	2.5	0.65

[1] Total = Minor + Major + Severe + Critical.

[2] AQL expressed as defects per 100 units.

TABLE VII—CUTS AND PIECES

	Total [1]	Major	Severe	Critical
Grade A: AQL [2]	6.5	2.5	1.0	0.4
Grade B: AQL [2]	15.0	5.0	1.5	1.0

[1] Total = Minor + Major + Severe + Critical.

[2] AQL expressed as defects per 100 units (50-5 g increments in 250 g).

TABLE VIII—CHOPPED

	Total[1]	Major	Severe	Critical
Grade A: AQL[2]	6.5	2.5	1.0	0.25
Grade B: AQL[2]	15.0	5.0	1.5	0.65

[1] Total=Minor + Major + Severe + Critical.

[2] AQL expressed as defects per 100 units (100-2.5 g increments in 250 g).

§ 52.641 Sample size.

The sample size to determine compliance with requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (§§ 52.1-52.83), for lot inspection and on-line inspection, as applicable.

§ 52.642 Determining proportions of head material and leaf material.

(a) *Method.* The proportions of head material and leaf material in cut and chopped broccoli may be determined as follows:

(1) *Equipment needed.* (i) 250 ml beaker; (ii) gram scale, or other suitable balance; (iii) laboratory tweezers, scalpel, or other suitable instrument for separating the stem material, leaf material, and head material; and (iv) flat grading tray.

(2) *Procedure.* (i) Thoroughly mix the sample unit to be tested if it is not the entire contents of a container;

(ii) Weigh 50 g (1.8 oz) in the case of chopped broccoli into a previously tared 250 ml beaker;

(iii) Weigh 250 g (8.8 oz) in the case of cut broccoli into a previously tared container;

(iv) Spread the weighed product out on a flat grading tray;

(v) Separate the stem material from the head and leaf material; and

(vi) Separate the leaf material from the head material. Weigh each separately and record the weight.

§ 52.643 Compliance with style requirements.

(a) *Lot inspection*—(1) *spears and short spears.* A lot of frozen broccoli spears or short spears is considered as meeting the requirements for style if the Acceptable Quality Levels (AQL) in Table II are not exceeded.

(2) *Cut and chopped.* A lot of cut or chopped frozen broccoli is considered as meeting the style requirements for cut or chopped if:

(i) The requirements with respect to leaf material and head material in § 52.632 are met;

(ii) No individual sample unit of cut broccoli contains less than 37.5 g (1.3 oz) of head material or more than 87.5 g (3.1 oz) of leaf material;

(iii) No individual sample unit of chopped broccoli contains less than 8.5 g (0.3 oz) of head material or more than 17.5 g (0.6 oz) of leaf material; and

(iv) The Acceptable Quality Levels (AQL) specified in Table III or Table IV, as applicable, are not exceeded.

(b) *On-line inspection*—(1) *Spears and short spears.* A portion of production of frozen broccoli spears or short spears is considered as meeting the requirements for style if the Acceptable Quality Levels (AQL) in Table II are not exceeded.

(2) *Cut and chopped.* A portion of production of frozen broccoli is considered as meeting the style requirements for cut or chopped if:

(i) The requirements with respect to leaf material and head material in § 52.632 are met;

(ii) No individual sample unit of cut broccoli contains less than 37.5 g (1.3 oz) of head material or more than 87.5 g (3.1 oz) of leaf material;

(iii) No individual sample unit of chopped broccoli contains less than 8.5 g (0.3 oz) of head material or more than 17.5 g (0.6 oz) of leaf material; and

(iv) The Acceptable Quality Levels (AQL) specified in Table III or Table IV, as applicable, are not exceeded.

(c) *Single sample unit*—(1) *Spears and short spears.* Each unofficial sample unit of spears or short spears submitted for quality evaluation will be treated individually and is considered as meeting the requirements for style if the Acceptable Quality Levels (AQL) in Table II are not exceeded.

(2) *Cut and chopped.* Each unofficial sample unit of frozen broccoli is considered as meeting the style requirements for cut or chopped if:

(i) The requirements with respect to leaf material and head material in § 52.632 are met; and

(ii) The Acceptable Quality Levels (AQL) specified in Table III or Table IV, as applicable, are not exceeded.

§ 52.644 Compliance with quality requirements.

(a) *Lot inspection.* A lot of frozen broccoli is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.637 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables VI, VII, or VIII, as applicable for the style, are not exceeded.

(b) *On-line inspection.* A portion of production is considered as meeting requirements for quality if:

(1) The prerequisite requirements specified in § 52.637 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables VI, VII, or VIII, as applicable for the style, are not exceeded.

(c) *Single sample unit.* Each unofficial sample unit submitted for quality evaluation will be treated individually and is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.637 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables VI, VII, or VIII, as applicable for the style, are not exceeded.

Subpart—United States Standards for Grades of Frozen Brussels Sprouts

SOURCE: 46 FR 3825, Jan. 16, 1981, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.651 Product description.

Frozen Brussels sprouts means the frozen product prepared from the clean, sound succulent heads of the Brussels sprouts plant (*Brassica oleracea L. var. gemmifera*) by trimming, washing, blanching, and properly draining. The product is frozen in accordance with good commercial practice and maintained at temperatures necessary for its preservation.

§ 52.652 Definitions of terms.

(a) *Acceptable Quality Level* (*AQL*) means the maximum percent of defective units or the maximum number of defects per hundred units of product that, for the purpose of acceptance sampling, can be considered satisfactory as a process average.

(b) *Blemished* means a unit affected by surface or internal discoloration, pathological injury, insect injury, or by other means to the extent that the appearance or eating quality is affected:

(1) Slightly;

(2) Materially; or

(3) Seriously.

(c) *Character.* (1) *Good character* means the individual heads are well formed, compact or very compact, and reasonably firm.

(2) *Reasonably good character* means the individual heads are reasonably well formed, reasonably compact, and fairly firm.

(3) *Fairly good character* means the individual heads are fairly well formed.

(4) *Poor character* means the individual heads fail the requirements for fairly good character.

(d) *Color* (*individual units*). (1) *Well colored* means the individual units have a color ranging from a distinct dark green to a lighter predominating characteristic green color with a definite yellow cast.

(2) *Fairly well colored* means the individual units have a predominating characteristic yellow color with or without slight tinges of green color.

(e) *Defect* (*or defective*) means any nonconformance of a unit(s) of product from a specified requirement of a single characteristic.

(f) *Extraneous vegetable material* means harmless vegetable substances other than from Brussels sprouts.

(g) *Flavor and odor. "Normal flavor and odor"* means that the product, after cooking, is free from objectionable flavors or odors of any kind.

(h) *Loose leaves and loose small pieces* means Brussels sprouts leaves, pieces of leaves or small pieces of edible stalk or stems not attached to a unit.

(i) *Sample unit* means the amount of product specified to be used for grading. It may be: (1) The entire contents of a container;

(2) A portion of the contents of a container;

(3) A combination of the contents of two or more containers; or

(4) A portion of unpacked product.

(j) *Trim.* (1) *Well trimmed* means the appearance of the unit is not materially affected by mechanical damage or by cutting into the head or by cutting of the stalk or stem.

(2) *Poorly trimmed* means the appearance of the unit is materially affected by mechanical damage or by excessive cutting into the head, or by insufficient cutting of the stalk or stem.

(k) *Unit* means a Brussels sprout or portion thereof other than loose leaves and loose small pieces.

§ 52.653 Recommended sample unit size.

Meeting the requirements for factors of quality is based on a sample unit size of 50 units.

§ 52.654 Grades.

(a) *U.S. Grade A* is the quality of frozen Brussels sprouts that: (1) Meets the following prerequisites in which the sprouts: (i) Have similar varietal characteristics;

(ii) Have a normal flavor and odor;

(iii) Have a good overall brightness;

(iv) Are free from grit or silt that affect the appearance or eating quality; and

(v) Have loose leaves and loose small pieces that may slightly affect the appearance or eating quality.

(2) Is within the limits for defects as classified in Tables I and II and specified in Tables III and IV, as applicable.

(b) *U.S. Grade B* is the quality of frozen Brussels sprouts that:

(1) Meets the following prerequisites in which the sprouts: (i) Have similar varietal characteristics;

(ii) Have a normal flavor and odor;

(iii) Have a reasonably good overall brightness;

(iv) Are free from grit or silt that affect the appearance or eating quality; and

(v) Have loose leaves and loose small pieces that may materially affect the appearance or eating quality.

(2) Is within the limits for defects as classified in Tables I and II and specified in Tables III and IV, as applicable.

(c) *U.S. Grade C* is the quality of frozen Brussels sprouts that: (1) Meets the following prerequisites in which the sprouts: (i) Have similar varietal characteristics;

(ii) Have a normal flavor and odor;

(iii) Have a fairly good overall brightness;

(iv) Have no more than a slight trace of grit or silt; and

(v) Have loose leaves and loose small pieces that may seriously affect the appearance or eating quality.

(2) Is within the limits for defects as classified in Tables I and II and specified in Tables III and IV, as applicable.

(d) *Substandard* is the quality of frozen Brussels sprouts that fails to meet the requirements of *U.S. Grade C.*

§ 52.655 Factors of quality.

The grade of frozen Brussels sprouts is based on meeting the requirements for the following quality factors:

(a) *Prerequisite quality factors:*

(1) Varietal characteristics;

(2) Flavor and odor;

(3) Brightness;

(4) Grit or silt; and

(5) Loose leaves and loose small pieces.

(b) *Classified quality factors:*

(1) Individual unit color (in U.S. Grades A and B only);

(2) Blemish;

(3) Trim;

(4) Extraneous vegetable material; and

(5) Character.

§ 52.656 Classification of defects.

All defects, other than character defects, are classified as minor, major, severe, or critical. All character defects are classified as reasonably good, fairly good, or poor. Each "X" in Tables I and II represents "one (1) defect."

TABLE I—CLASSIFICATION OF DEFECTS (OTHER THAN CHARACTER)

Quality factor	Defects	Classification			
		Minor	Major	Severe	Critical
Individual unit color	Fairly well colored in U.S. Grades A and B only (each unit)		X		
Blemished	Slightly (each unit)	X			
	Materially (each unit)		X		
	Seriously (each unit)			X	
Trim	Poor (each unit)		X		
Extraneous vegetable material	Each piece				X

TABLE II—CLASSIFICATION OF CHARACTER DEFECTS

Quality factor	Defects	Reasonably good	Fairly good	Poor
Character	"B" (each unit)	X		
	"C" (each unit)		X	
	"Substandard" (each unit)			X

§ 52.657 Tolerances for defects.

TABLE III—ALL CLASSIFIED DEFECTS EXCEPT CHARACTER

	Total[3]	Major	Severe	Critical
	Grade A			
AQL[2]	20.0	12.5	4.0	0.15
	Grade B			
AQL[2]	40.0	33.0	8.5	1.5
	Grade C			
AQL[2]	50.0	33.0	10.0	2.5

[2] AQL expressed as defects per hundred units.
[3] Total = Minor + Major + Severe + Critical.

Table IV—Classified Defects for Character Only

	Grade					
	A			B		C
	Total[5]	Fairly good	Poor	Total[6]	Poor	Poor
AQL[4]	15.0	5.0	1.5	40.0	8.5	40.0

[4] AQL expressed as percent defective.
[5] Total = Reasonably Good + Fairly Good + Poor.
[6] Total = Fairly Good + Poor.

§ 52.658 Sample size.

The sample size to determine meeting the requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83), for lot grading and on-line grading, as applicable.

§ 52.659 Quality requirements.

(a) *Lot grading.* A lot of frozen Brussels sprouts is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.654 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables III and IV, as applicable, are not exceeded.

(b) *On-line grading.* A portion of production is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.654 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables III and IV, as applicable, are not exceeded.

(c) *Single sample unit.* Each single sample unit submitted for quality evaluation will be treated individually and is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.654 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables III and IV, as applicable, are not exceeded.

Subpart—United States Standards for Grades of Canned Carrots

SOURCE: 18 FR 7949, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, STYLES, AND GRADES

§ 52.671 Identity.

"Canned carrots" means the canned product properly prepared from the clean, sound root of the carrot plant as defined in the definitions and standards of identity for canned vegetables (21 CFR 155.200) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.672 Styles of canned carrots.

(a) "Whole" or "whole carrots" means canned carrots consisting of whole carrots that retain the approximate original conformation of the whole carrot.

(b) "Slices" or "sliced carrots" means canned carrots consisting of carrot slices produced by slicing whole carrots transverse to the longitudinal axis.

(c) "Quarters" or "quartered carrots" means canned carrots consisting of quarters of carrots produced by cutting whole carrots longitudinally into four approximately equal units. Whole carrots cut longitudinally into six units approximating the size and appearance of the quartered carrots are also permitted in this style.

(d) "Diced carrots" means canned carrots consisting of units produced by cutting whole carrots into cubes having edges, other than the rounded outer edges, measuring approximately ½ inch or less.

(e) "Julienne," "French style," or "shoestring" means canned carrots consisting of strips of carrots.

(f) "Cut" means canned carrots consisting of units which with respect to size or shape do not conform to any of the foregoing styles. Carrots which have been cut longitudinally into two approximately equal units are included in this style.

(g) "Unit" means an individual carrot or portion of a carrot in canned carrots.

§ 52.673 Grades of canned carrots.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned carrots that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a good color; that are practically free from defects; that are tender; that are practically uniform in size and shape; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned carrots that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a fairly good color; that are fairly free from defects; that are fairly tender; that are fairly uniform in size and shape; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned carrots that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.674 Recommended fill of container.

The recommended fill of container is not incorporated in the grade of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that the container of canned carrots be filled as full as practicable with carrots without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS, IN OUNCES, OF CARROTS

Container size or designation	Whole [1]		Sliced [1]		Diced	Quartered cut	Julienne
	Less than 1½ inches in diameter	1½ inches in diameter and over	Less than 1½ inches in diameter	1½ inches in diameter and over			
8-ounce tall	5½	5	5½	5	5½	5½	5¼
8-ounce jar	5½	5	5½	5	5½	5½	5¼
No. 1 picnic	6¾	6½	6¾	6½	7	7	6¾
No. 300	9¼	9	9½	9¼	10	10	8¾
No. 303	9¾	9¼	10	9½	10½	10½	9
No. 303 jar	9¾	9¼	10	9½	10½	10½	9
No. 2	12½	12¼	12½	12	12¾	12½	11½
No. 2½	19½	19	19	18½	19	18½	18¼
No. 2½ jar	19¼	18¾	18¾	18¼	18¾	18¼	18
No. 10	67	66	67	66	70	68	64

[1] Mixed sizes to be based on drained weight for predominant size of individual units.

§ 52.675 Recommended minimum drained weight.

The minimum drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned carrots is determined by emptying the contents of the container upon a U.S. Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage and allowing to drain for two minutes. The drained weight is the weight of the sieve and the carrots less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2½ size can (401 x 411) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

[18 FR 7949, Dec. 9, 1953, as amended at 20 FR 364, Jan. 15, 1955. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and further amended at 50 FR 26141, June 24, 1985]

SIZES

§ 52.676 Sizes of carrots in whole carrots.

The size of any carrot is determined by measuring the longest diameter through the center transverse to the longitudinal axis of the carrot.

§ 52.677 Sizes of carrot slices in sliced carrots.

The size of any slice in sliced carrots is determined by measuring the smallest diameter of the largest surface of the slice.

§ 52.678 Sizes of carrot quarters in quartered carrots.

The size of any quarter in quartered carrots with respect to diameter is determined by measuring the largest cut surface transverse to the longitudinal axis.

FACTORS OF QUALITY

§ 52.679 Ascertaining the grade.

(a) The grade of canned carrots is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, uniformity of size and shape, absence of defects, and texture.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	25
Uniformity of size and shape	15
Absence of defects	30
Texture	30
Total score	100

(c) "Normal flavor and odor" means that the canned carrots are free from objectionable flavors and objectionable odors of any kind.

§ 52.680 Ascertaining the rating for the factors which are scored.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, "12 to 15 points" means 12, 13, 14, or 15 points).

§ 52.681 Color.

(a) (*A*) *classification.* Canned carrots that possess a good color may be given a score of 21 to 25 points. "Good color" means that the canned carrots possess an orange-yellow color that is bright and typical of canned carrots, and that the presence of green units does not more than slightly affect the appearance or eating quality of the product.

(b) (*C*) *classification.* If the canned carrots possess a fairly good color, a score of 18 to 20 points may be given. Canned carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned carrots possess the typical color of canned carrots, that such color may be slightly dull but not off-color, and that the presence of green units does not materially affect the appearance or eating quality of the product.

(c) (*SStd*) *classification.* Canned carrots that are off-color for any reason or that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.682 Uniformity of size and shape.

(a) (*A*) *classification.* Canned carrots that are practically uniform in size and shape may be given a score of 12 to 15 points. "Practically uniform in size and shape" has the following meanings with respect to the various styles of canned carrots:

(1) *Whole carrots.* The size of the individual carrot is not more than 1¾ inches in diameter, measured as aforesaid; the carrots may vary moderately in shape and the diameter of the largest unit is not more than 50 percent greater than the diameter of the second smallest unit.

(2) *Quartered carrots.* The carrots from which the quarters have been prepared were of a size not more than 2½ inches in diameter, measured as aforesaid, and the diameter of the largest quarter is not more than 50 percent greater than the diameter of the second smallest quarter, and the length of the longest quarter is not more than 50 percent greater than the length of the second shortest quarter.

(3) *Sliced carrots.* The individual slice is not more than ⅜ inch in thickness when measured at the thickest portion; the diameter of each slice is not more than 2½ inches, measured as aforesaid; and of all the sliced carrots, in the 90 percent, by count, that are most uniform in diameter, the diameter of the slice with the greatest diameter does not exceed the diameter of the slice with the smallest diameter by more than 50 percent: *Provided,* That the overall appearance of the product is not materially affected.

(4) *Diced carrots.* The units are practically uniform in size and shape with edges, other than the rounded outer edges, measuring approximately ½ inch or less; and the aggregate weight of all units of irregular shape which are noticeably smaller than one-half the volume of an average size cube and of all noticeably large and large irregular shaped units does not exceed 12 percent of the weight of all the units.

(5) *Julienne, French style, or shoestring.* The strips of carrots are practically uniform in size and shape, with cross sections measuring approximately 3/16 inch, and the aggregate weight of all strips less than ½ inch in length does not exceed 12 percent of the weight of all the strips.

(6) *Cut.* The individual units weigh not less than ¼ ounce and the largest unit is not more than four times the weight of the second smallest unit. When cut longitudinally into two approximately equal units, the carrots from which the units have been pre-

pared were of a size not more than 2½ inches in diameter, measured as aforesaid, and the weight of the largest unit is not more than 50 percent greater than the weight of the second smallest unit.

(b) (*C*) *classification*. If the canned carrots are fairly uniform in size and shape a score of 8 to 11 points may be given. Canned carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size and shape" has the following meanings with respect to the various styles of canned carrots:

(1) *Whole carrots*. The size of the individual carrot is not more than 2¼ inches in diameter, measured as aforesaid; the carrots may vary considerably in shape, and the diameter of the largest unit is not more than twice the diameter of the second smallest unit.

(2) *Quartered carrots*. The carrots from which the quarters have been cut were of a size not more than 2½ inches in diameter, measured as aforesaid, and the diameter of the largest quarter is not more than twice the diameter of the second smallest unit, and the length of the longest quarter is not more than twice the length of the second shortest quarter.

(3) *Sliced carrots*. The individual slide is not more than ⅜ inch in thickness when measured at the thickest portion; the diameter of each slice is not more than 2½ inches, measured as aforesaid; and of all the sliced carrots, in the 90 percent, by count, that are most uniform in diameter, the diameter of the slice with the greatest diameter is not more than twice the diameter of the slice with the smallest diameter: *Provided*, That the overall appearance of the product is not seriously affected.

(4) *Diced carrots*. The units are fairly uniform in size and shape, with edges, other than the rounded outer edges, measuring approximately ½ inch or less; and the aggregate weight of all units of irregular shape which are noticeably smaller than one-half the volume of an average size cube and of all noticeably large and large irregular shaped units does not exceed 25 percent of the weight of all the units.

(5) *Julienne, French style, or shoestring*. The strips of carrots are fairly uniform in size and shape, with cross sections measuring approximately 3/16 inch and the aggregate weight of all the strips less than ½ inch in length does not exceed 25 percent of the weight of all the strips.

(6) *Cut*. The individual units weigh not less than ⅕ ounce and the largest unit is not more than twelve times the weight of the second smallest unit. When cut longitudinally into two approximately equal units, the carrots from which the units have been prepared were of a size not more than 2½ inches in diameter, measured as aforesaid, and the weight of the largest unit is not more than twice the weight of the second smallest unit.

(c) (*SStd*) *classification*. Canned carrots that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 7 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 7949, Dec. 9, 1953, as amended at 24 FR 5363, July 2, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.683 Absence of defects.

(a) *General*. The factor of absence of defects refers to the degree of freedom from defective units. Defective units are units damaged by mechanical injury, unpeeled units, units blemished or seriously blemished by brown or black internal or external discoloration, sunburn, or green colored units, pathological injury or insect injury, and units blemished or seriously blemished by other means.

(1) "Damaged by mechanical injury" means crushed, broken, or cracked units, units with excessively frayed edges and surfaces, excessively trimmed units, or damaged by other means.

(2) "Unpeeled unit" means any unit possessing an unpeeled area greater than the area of a circle ¼ inch in diameter.

(3) "Blemished" means any unit blemished to the extent that the appearance or eating quality is materially affected.

(4) "Seriously blemished" means any unit blemished to the extent that the appearance or eating quality is seriously affected.

(b) (*A*) *classification.* Canned carrots that are practically free from defects may be given a score of 26 to 30 points "Practically free from defects" has the following meanings with respect to the various styles of canned carrots:

(1) *Whole carrots.* The aggregate weight of all defective units does not exceed 15 percent of the weight of all the units, and of such 15 percent not more than ½ thereof or one carrot, whichever weighs more, may consist of blemished units and seriously blemished units: *Provided,* That not more than 1 percent, by weight, of all the units may be seriously blemished, and that the presence of blemished and seriously blemished units does not more than slightly affect the appearance or eating quality of the product.

(2) *Sliced, quartered, and cut carrots.* The aggregate weight of all defective units does not exceed 15 percent of the weight of all the units, and of such 15 percent not more than ½ thereof or one slice, quarter or cut, whichever weighs more, may consist of blemished units and seriously blemished units: *Provided,* That not more than 1 percent, by weight, of all the units may be seriously blemished, and that the presence of blemished and seriously blemished units does not more than slightly affect the appearance or eating quality of the product.

(3) *Diced, Julienne, French style, or shoestring carrots.* The aggregate weight of all defective units does not exceed 10 percent of the weight of all the units and of such 10 percent not more than ½ thereof may consist of blemished units and seriously blemished units: *Provided,* That not more than 1 percent, by weight, of all the units may be seriously blemished, and that the presence of blemished and seriously blemished units does not more than slightly affect the appearance or eating quality of the product.

(c) (*C*) *classification.* Canned carrots that are fairly free from defects may be given a score of 22 to 25 points. Canned carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meanings with respect to the various styles of canned carrots:

(1) *Whole carrots.* The aggregate weight of all defective units does not exceed 25 percent of the weight of all the units, and of such 25 percent, not more than ½ thereof may consist of blemished units and seriously blemished units: *Provided,* That not more than 2 percent, by weight, of all the units may be seriously blemished, and that the presence of blemished and seriously blemished units does not seriously affect the appearance or eating quality of the product.

(2) *Sliced, quartered, and cut carrots.* The aggregate weight of all defective units does not exceed 25 percent of the weight of all the units, and of such 25 percent not more than ½ thereof may consist of blemished units and seriously blemished units: *Provided,* That not more than 2 percent, by weight, of all the units may be seriously blemished, and that the presence of blemished and seriously blemished units does not seriously affect the appearance or eating quality of the product.

(3) *Diced, Julienne, French style, or shoestring carrots.* The aggregate weight of all defective units does not exceed 20 percent of the weight of all the units, and of such 20 percent not more than ½ thereof may consist of blemished units and seriously blemished units: *Provided,* That not more than 2 percent, by weight, of all the units may be seriously blemished, and that the presence of blemished and seriously blemished units does not seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Canned carrots that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.684 Texture.

(a) *General.* The factor of texture refers to the tenderness of the carrots and the degree of freedom from coarse and fibrous units.

(b) (*A*) *classification.* Canned carrots that possess a tender texture may be given a score of 26 to 30 points. "Tender texture" means that the carrots are tender and firm but not fibrous, and possess a practically uniform texture.

(c) (*C*) *classification.* If the canned carrots possess a fairly tender texture, a score of 22 to 25 points may be given. Canned carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender texture" means that the carrots are fairly tender, may be variable in texture but not soft or mushy, tough or hard, and there may be present a few units which possess a coarse or fibrous texture.

(d) (*SStd*) *classification.* Canned carrots that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.685 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.686 Score sheet for canned carrots.

Number, size, and kind of container
Container mark or identification
Label
Net weight (ounces)
Vacuum (inches)
Drained weight (ounces)
Style
Size of whole carrots (count)
Size of sliced carrots (diameter)

Factors		Score points	
Color	25	(A)	21-25
		(C)	[1] 18-20
		(SStd.)	[1] 0-17
Uniformity of size and shape.	15	(A)	12-15
		(C)	[1] 8-11
		(S Std.)	[1] 0-7
Absence of defects.	30	(A)	26-30
		(C)	[1] 22-25
		(S Std.)	[1] 0-21
Texture	30	(A)	26-30
		(C)	[1] 22-25
		(S Std.)	[1] 0-21
Total score	100		

Normal flavor and odor
Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Carrots

SOURCE: 27 FR 74, Jan. 5, 1962, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.701 Product description.

Frozen carrots are the clean and sound product prepared from the fresh root of the carrot plant (Daucus carota) by washing, sorting, peeling, trimming, and blanching, and are frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.702 Styles of frozen carrots.

(a) "Whole" or "whole carrots" means carrots that retain the approximate conformation of a whole carrot.

(b) "Halves" or "halved" means carrots cut longitudinally into two units.

(c) "Quarters" or "quartered" means carrots cut longitudinally into four approximately equal units. Carrots cut longitudinally or cut longitudinally and crosswise into six or eight units approximating the size and appearance of quartered carrots are also permitted in this style.

(d) "Slices" or "sliced" means carrots sliced transversely to the longitudinal axis.

(e) "Diced" means carrots consisting of approximate cube-shaped units.

(f) "Double-diced" means carrots that consist of approximate rectangular shapes which resemble the equivalent of two cube-shaped units.

(g) "Strips" means carrots that consist of longitudinally-cut strips and includes such forms as French style (or shoestring).

(h) "Chips" means carrots that consist of predominantly small-sized units (such as less than one-half cube) and variously shaped pieces or slivers in which the longest-edge dimension approximates not more than one-half inch.

(i) "Cut" means carrots consisting of cut units which do not conform to any of the foregoing styles.

§ 52.703 Grades of frozen carrots.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen carrots of any style other than chips that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a good color; that are practically uniform in size and shape for the applicable style; that are practically free from defects; that are tender; and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen carrots of any style that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a reasonably good color; that are reasonably uniform in size and shape for the applicable style; that are reasonably free from defects; that are reasonably tender; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen carrots that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.704 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product.

(1) *Factors not rated by score points.* (i) Varietal characteristics.

(ii) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	20
Uniformity of size and shape	20
Absence of defects	30
Texture	30
Total score	100

(b) *Evaluation of quality.* The score for the factors of color, uniformity of size and shape, and absence of defects in frozen carrots is determined immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units. A representative sample of the product is cooked to determine texture and flavor and odor.

(c) *Definition of normal flavor and odor.* "Normal flavor and odor" means a good characteristic flavor and odor of properly prepared frozen carrots that are free from objectionable flavors and objectionable odors of any kind, as evaluated after thawing and after cooking.

§ 52.705 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.706 Color.

(a) *General.* The evaluation of color shall be determined on the thawed product. The color is based upon the uniformity and the brightness of the typical exterior yellow to orange-yellow color of the units. The presence of green, white, or orange-brown units are scored under this factor when the overall color is affected.

(b) (*A*) *classification*. Frozen carrots that possess a good color may be given a score of 18 to 20 points. "Good color" means that the frozen carrots possess an orange-yellow color that is bright and typical of frozen carrots and that the presence of green, white, or orange-brown units does not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification*. If the frozen carrots possess a reasonably good color, a score of 16 or 17 points may be given. Frozen carrots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the frozen carrots possess a typical color of frozen carrots and such color may be slightly dull but not off color and that the presence of green, white, or orange-brown units does not materially affect the appearance or eating quality of the product.

(d) (*SStd*) *classification*. Frozen carrots that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.707 Uniformity of size and shape.

(a) *Ascertaining dimensions*. Size dimensions of the various units are measured as follows:

(1) *Diameter of whole carrots*. The diameter of a whole carrot is the shortest diameter at the greatest circumference measured at right angles to the longitudinal axis of the carrot.

(2) *Width of halved carrots*. The width of a half is the widest cut surface measured at right angles to the length.

(3) *Width of quartered carrots*. The width of a quarter is the widest cut surface measured at right angles to the length.

(4) *Diameter and thickness of sliced carrots*. The diameter of a slice is the shortest diameter of the larger of the two cut surfaces of the slice. The thickness of a slice is measured at its thickest portion.

(5) *Size of diced carrots*. The size of a dice is the length of the edge (other than rounded outer edges) which is most representative of the cube's size.

(b) *Definitions of shapes and sizes*. (1) "Other shapes and sizes" with respect to all styles include, but are not limited to, noticeably large units much in excess of normal size units for the style and large, irregularly-shaped units not normal for the style; and with respect to diced and double-diced styles include units of irregular shapes which are noticeably smaller than the equivalent of one-half the volume of an average size cube or double-diced cube, as the case may be.

(2) "Very small pieces" with respect to diced style means pieces smaller than the equivalent of one-fourth the volume of an average size cube, and with respect to double-diced style means pieces smaller than the equivalent of one-fourth the volume of an average size double-diced unit.

TABLE I—UNIFORMITY OF SIZE AND SHAPE REQUIREMENTS FOR FROZEN CARROTS

Styles	(A) Classification		(B) Classification	
	Measurement and/or shape of individual units	Uniformity of units of product, excluding 10%, by count, that vary to an extreme	Measurement and/or shape of individual units	Uniformity of units of product, excluding 10%, by count, that vary to an extreme.
Whole	1½-inch maximum diameter	Unit with largest diameter, or width, is not more than twice that of unit with smallest diameter, or width.	2¼-inch maximum diameter	Unit with largest diameter, or width, not more than twice that of unit with smallest diameter, or width.
Halved	1½-inch maximum width		1¾-inch maximum width	
Quartered	1¼-inch maximum width		1¾-inch maximum width	
Sliced	2-inch maximum diameter Approximate ¼-inch maximum thickness.	Unit with largest diameter is not more than twice that of unit with smallest diameter. and uniformity of thickness does not vary markedly.	2½-inch maximum diameter Approximate ¾-inch maximum thickness.	No limits as to uniformity between largest and smallest diameters but variations in diameters and thickness do not seriously affect over-all appearance.
Diced	Approximate cube-shapes, ½ inch or less in size.	10%, by weight, maximum may be other shapes and sizes.[1]	Approximate cube-shapes, ½ inch or less in size.	20%, by weight, maximum may be other shapes and sizes.[2]
Double-diced	Approximate double-cube shapes, 1 inch or less long; ½ inch or less in cross-section diameter.	12%, by weight, maximum may be other shapes and sizes.[1]	Approximate double-cube shapes of varying sizes and shapes.	25%, by weight maximum may be other shapes and sizes.[2]
Strips	Approximate french-cut shapes, with flat-parallel or corrugated-parallel surfaces, ½ inch or more in length.	12%, by weight, maximum may be less than ½ inch long.	Approximate french-cut shapes, with flat-parallel or corrugated-parallel surfaces, ½ inch or more in length.	25%, by weight, maximum may be less than ½ inch long.
Cuts	(3)	(3)	(5)	(5).
Chips	(4)	(4)	(6)	(6).

[1] Provided, presence of very small pieces does not materially affect appearance of product.

[2] Provided, presence of very small pieces does not seriously affect appearance of product.

[3] Units may vary considerably in size and shape provided over-all appearance is not materially affected.

[4] [Limited to Grade B or lower]

[5] Units may vary considerably in size and shape provided over-all appearance is not seriously affected.

[6] Units are small (such as less than ½ cube), individually reasonably uniform in weight, may be variously shaped, approximating not more than ½ inch in longest-edge dimension.

(c) (*A*) *classification.* Frozen carrots of styles other than "chips" that are practically uniform in size and shape may be given a score of 18 to 20 points. "Practically uniform in size and shape" means that:

(1) The carrots comply with the measurement, shape, and uniformity requirements for (A) classification in Table I of this subpart; and, in addition

(2) The over-all appearance of the product for the applicable style is not materially affected by sizes and shapes other than that of normal-shaped units which may vary moderately in shape.

(d) (*B*) *classification.* If the frozen carrots of any style are reasonably uniform in size and shape, a score of 16 or 17 points may be given. Frozen carrots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably uniform in size and shape" means that:

(1) The carrots comply with the measurement, shape, and uniformity requirements for (B) classification in Table I of this subpart; and, in addition

(2) The overall appearance of the product for the applicable style is not seriously affected by sizes and shapes other than that of normal-shaped units which may vary considerably in shape.

(e) (*SStd*) *classification.* Frozen carrots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[27 FR 74, Jan. 5, 1962, as amended at 39 FR 2097, Jan. 17, 1974. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.708 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from defective units or defects. "Defective units" or "defects" are units damaged by mechanical injury or other means; unpeeled units; units blemished or seriously blemished by brown or black internal or external discoloration, sunburn, or green or white colored units, pathological injury or insect injury; and units blemished or seriously blemished by other means.

TABLE II.—MAXIMUM ALLOWANCES FOR DEFECTS OR DEFECTIVE UNITS IN FROZEN CARROTS

Defects (for styles, as indicated)	(A) Classification	(B) Classification
Whole, halved, quartered:		
Total all defects, including blemished and seriously blemished.	15%, by count, of all units	25%, by count, of all units.
Blemished and seriously blemished	Limitations [1]—7½%, by count, but no more than 2%, by count, seriously blemished.	Limitations [2]—12½%, by count, but no more than 4%, by count, seriously blemished.
Sliced, cut:		
Total all defects, including blemished and seriously blemished.	15%, by weight, of all units	25%, by weight, of all units.
Blemished and seriously blemished	Limitations [1]—7½%, by weight, but no more than ¾ of 1%, by weight, seriously blemished.	Limitations [2]—12½%, by weight, but no more than 1½%, by weight, seriously blemished.
Diced, Double-diced, strips:		
Total all defects, including blemished and seriously blemished.	10%, by weight, of all units	16%, by weight, of all units.
Blemished and seriously blemished	Limitations [1]—5%, by weight, but no more than ¾ of 1%, by weight, seriously blemished.	Limitations [2]—8%, by weight, but no more than 1½%, by weight, seriously blemished.
Chips:		
Total all defects, including blemished and seriously blemished.	Limited to Grade B or lower classification.	16%, by weight, of all units.
Blemished and seriously blemished		Limitations [2]—8%, by weight, but no more than 1½%, by weight, seriously blemished.

[1] Provided such blemished and/or seriously blemished units do not materially affect the appearance or edibility of the product.

[1] Provided such blemished and/or seriously blemished units do not seriously affect the appearance or edibility of the product.

(b) *Definitions of defective units and defects.* (1) "Damaged by mechanical injury or other means" include crushed, broken, or cracked units; units with excessively frayed edges and surfaces; excessively or poorly trimmed units; or damaged by other similar means to an extent that the appearance or eating quality of the unit is seriously affected.

(2) "Unpeeled areas" are considered defects when on whole, halved, or quartered units the unpeeled area is greater than the area of a circle three-eighths inch in diameter; and on smaller units the unpeeled area is greater than the area of a circle one-eighth inch in diameter.

(3) "Blemished" means any unit blemished to the extent that the appearance or eating quality is materially affected.

(4) "Seriously blemished" means any unit blemished to the extent that the appearance or eating quality is seriously affected.

(c) *(A) classification.* Frozen carrots that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that:

(1) The limits for allowable defects or defective units in the applicable styles do not exceed the maximum limits for (A) classification in Table II of this subpart; and

(2) Notwithstanding the applicable allowances in Table II the defects or defective units (whether or not specifically defined), individually and collectively, do not materially affect the appearance or edibility of the product.

(d) *(B) classification.* If the frozen carrots are reasonably free from defects, a score of 24 to 26 points may be given. Frozen carrots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) The limits for allowable defects or defective units in the applicable styles do not exceed the maximum limits for (B) classification in Table II of this subpart; and

(2) Notwithstanding the applicable allowances in Table II the defects or defective units (whether or not specifically defined), individually and collectively, do not seriously affect the appearance or edibility of the product.

(e) *(SStd) classification.* Frozen carrots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.709 Texture.

(a) *General.* The factor of texture refers after cooking to the tenderness and freedom from mushiness of the carrots and the degree of freedom from coarse or fibrous units.

(b) *(A) classification.* Frozen carrots that possess a tender texture may be given a score of 27 to 30 points. "Tender texture" means that the carrots are tender, not fibrous nor mushy, and possess a practically uniform texture.

(c) *(B) classification.* If the frozen carrots possess a reasonably tender texture, a score of 24 to 26 points may be given. Frozen carrots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably tender texture" means that the carrots are reasonably tender, may be variable in texture but not generally tough, hard, nor mushy, and there may be present a few units which possess a coarse, fibrous, or mushy texture.

(d) *(SStd) classification.* Frozen carrots that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.710 Ascertaining the grade of a lot.

The grade of a lot of frozen carrots covered by these standards is determined by procedures set forth in the Regulations Governing Inspection and

Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.711 Score sheet for frozen carrots.

Size and kind of container ....

Container marks or identification ....

Label ....

Net weight (ounces) ....

Style ....

Factors		Score points	
Color	20	(A)	18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Uniformity of size and shape.	20	(A)	[2] 18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Absence of defects	30	(A)	27-30
		(B)	[1] 24-26
		(SStd)	[1] 0-23
Texture	30	(A)	27-30
		(B)	[1] 24-26
		(SStd)	[1] 0-23
Total score	100		

Grade ....

Flavor and odor ....

[1] Indicates limiting rule.

[2] Limits style of "chips" to Grade B or lower.

Subpart—United States Standards for Grades of Frozen Cauliflower

SOURCE: 18 FR 7953, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.721 Product description.

Frozen cauliflower is prepared from the fresh flower heads of the cauliflower plant (Brassica oleracea botrytis) by trimming, washing, and blanching and is frozen and maintained at temperatures necessary for preservation of the product.

§ 52.722 Grades of frozen cauliflower.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen cauliflower that possesses similar varietal characteristics; that possesses a good flavor and odor; that possesses a good color; that is practically free from defects; that possesses a good character; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen cauliflower that possesses similar varietal characteristics; that possesses a fairly good flavor and odor; that possesses a reasonably good color; that is reasonably free from defects; that possesses a reasonably good character; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen cauliflower that fails to meet the requirements of U.S. Grade B or U.S. Extra Standard.

FACTORS OF QUALITY

§ 52.723 Ascertaining the grade.

(a) The grade of frozen cauliflower is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Absence of defects	40
Character	20
Total score	100

(c) The scores for the factors of color, absence of defects, and character are determined immediately after thawing so that the product is sufficiently free from ice crystals to permit proper handling as individual units, except that buds or buttons which are slightly dark in typical color are cooked before evaluating the factor of color. The product is cooked to determine the flavor and odor.

(d) "Good flavor and odor" means that the product after cooking has a good, characteristic, normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(e) "Fairly good flavor and odor" means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.724 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.725 Color.

(a) (*A*) *classification.* Frozen cauliflower that possesses a good color may be given a score of 34 to 40 points. "Good color" means that the buds or buttons possess a characteristic white to light cream color over the tops, which color may be slightly variable, and that the product may possess a characteristic green color or bluish tint on the branches and greenish yellow to light green modified leaves or bracts: *Provided,* That the buds or buttons may possess a color slightly darker than light cream which disappears upon cooking.

(b) (*B*) *classification.* If the frozen cauliflower possesses a reasonably good color, a score of 28 to 33 points may be given. Frozen cauliflower that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the buds or buttons may possess a variable characteristic color ranging from white or light cream to dull white or dark cream over the tops, and that the product may possess a characteristic green color or bluish tint on the branches and greenish yellow to light green modified leaves or bracts: *Provided,* That the buds or buttons may possess a color darker than dark cream, but not seriously darkened, which color disappears upon cooking to the extent that the appearance of the product is no more than slightly affected.

(c) (*SStd*) *classification.* Frozen cauliflower that is off color for any reason or that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.726 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from poorly trimmed clusters and small clusters, from damaged and seriously damaged clusters and small clusters, from pieces and detached fragments, and from any other defects which detract from the appearance or edibility of the product.

(1) "Portion of a head" means an individual portion or section of a head made up of buds or buttons and the adjoining stems or portions of stems and attached modified leaves or bracts.

(2) "Cluster" means a portion of a head which weighs more than ¼ ounce and which is not less than ¾ inch in the greatest dimension measured across the top of the cluster.

(3) "Small cluster" means a portion of a head which weighs not more than ¼ ounce and which is not less than ¾ inch in the greatest dimension measured across the top of the cluster.

(4) "Piece" means a small portion of a head which is less than ¾ inch in the greatest dimension measured across the top of the cluster. "Pieces" are considered as defects whether or not defective.

(5) "Detached fragments" are detached leaves, detached modified leaves or bracts, or detached portions of stems. Detached fragments are considered as defects whether or not defective.

(6) "Poorly trimmed cluster" or "poorly trimmed small cluster" means that the appearance of the cluster is seriously affected by ragged cutting or gouging, or both, or is seriously affected by attached modified leaves or bracts.

(7) "Damaged cluster" or "damaged small cluster" means that the cluster is damaged by dark discoloration, pathological injury, insect injury, or

any other injury or defect which singly or in combination affect materially the appearance or edibility of the cluster.

(8) "Seriously damaged cluster" or "seriously damaged small cluster" means that the cluster is damaged to the extent that the appearance or edibility of the cluster is seriously affected.

(b) (*A*) *classification.* Frozen cauliflower that is practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the product is practically free from pieces and detached fragments and from any defects not specifically mentioned that affect materially the appearance or edibility of the product, and, in addition, means that:

(1) No seriously damaged clusters are present; and

(2) Not more than a total of 15 percent, by weight, of the cauliflower may be poorly trimmed clusters, poorly trimmed small clusters, damaged clusters, damaged small clusters, and seriously damaged small clusters: *Provided,* Not more than 10 percent, by weight, of the cauliflower are damaged clusters,[1] damaged small clusters, and seriously damaged small clusters: *Further provided,* Not more than 5 percent, by weight, of the cauliflower are seriously damaged small clusters.

(c) (*B*) *classification.* If the frozen cauliflower is reasonably free from defects, a score of 28 to 33 points may be given. Frozen cauliflower that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the product is reasonably free from pieces and detached fragments and from any defects not specifically mentioned that affect seriously the appearance or edibility of the product, and in addition, means that:

(1) Not more than a total of 30 percent, by weight, of the cauliflower may be poorly trimmed clusters, poorly trimmed small clusters, damaged clusters, damaged small clusters, seriously damaged clusters, and seriously damaged small clusters: *Provided,* Not more than 15 percent, by weight, of the cauliflower are damaged clusters, damaged small clusters, seriously damaged clusters, seriously damaged small clusters: *Further provided,* Not more than 10 percent, by weight, of the cauliflower are seriously damaged clusters and seriously damaged small clusters.

(d) (*SStd*) *classification.* Frozen cauliflower that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.727 Character.

(a) *General.* The factor of character refers to the development, texture, and degree of freedom from ricey and fuzzy units.

(1) "Ricey units" are sections of the head on which the ultimate branches have become elongated, causing the flower clusters to separate and present a loose or open and sometimes granular appearance.

(2) "Fuzzy units" are sections of the head that have elongated individual flowers or pedicels that result in a very fuzzy appearance.

(b) (*A*) *classification.* Frozen cauliflower that possesses a good character may be given a score of 17 to 20 points. "Good character" means that not less than 80 percent, by weight, of the cauliflower are firm and compact clusters of buds or buttons; and that the remainder of the clusters may be reasonably firm and reasonably compact or may be slightly soft, slightly ricey, or slightly fuzzy.

(c) (*B*) *classification.* If the frozen cauliflower possesses a reasonably good character, a score of 14 to 16 points may be given. Frozen cauliflower that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that not less than 60 percent, by weight, of the cauliflower are at least reasonably firm and reasonably compact clusters of buds or buttons; and that the remainder of the clusters may be soft, ricey, or fuzzy but not more than 10 percent, by weight, of the cauliflower may be mushy.

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[1] One cluster in a single container is permitted to be damaged if such cluster exceeds 10 percent, by weight, provided that in all containers comprising the sample, such damaged cluster does not exceed an average of 10 percent by weight.

(d) *(SStd) classification.* Frozen cauliflower that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.728 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.729 Score sheet for frozen cauliflower.

Size and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....

Factors		Score points	
Color	40	(A)	34-40
		(B)	[1] 28-33
		(S Std)	[1] 0-27
Absence of defects	40	(A)	34-40
		(B)	[1] 28-33
		(S Std)	[1] 0-27
Character	20	(A)	17-20
		(B)	[1] 14-16
		(S Std)	[1] 0-13
Total score	100		

Flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Sulfured Cherries

SOURCE: 18 FR 7955, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, SIZES, AND GRADES

§ 52.741 Product description.

"Sulfured cherries" are prepared from properly matured whole cherries (Prunus avium or Prunus cerasus) of similar varietal characteristics; are packed with or without the addition of a hardening agent, in a solution of sulfur dioxide of sufficient strength to preserve the product.

§ 52.742 Styles of sulfured cherries.

(a) "Unstemmed and unpitted" is the style of sulfured cherries consisting of whole cherries (irrespective of size) with pits, and not less than 80 percent, by weight, of all the cherries have the stems attached.

(b) "Stemmed and unpitted" is the style of sulfured cherries consisting of whole cherries (irrespective of size) with pits and not more than ½ of 1 percent, by weight, of all the cherries are cherries with stems attached.

(c) "Stemmed and pitted" is the style of sulfured cherries consisting of whole cherries of which not more than ½ of 1 percent, by weight, of all the cherries are cherries with stems attached and: (1) For each 40 ounces of all the cherries there may be present not more than 2 cherries with pits when all cherries are of small size or extra small size; (2) for each 40 ounces of all the cherries there may be present not more than 1 cherry with a pit when all cherries are of medium size, large size, or different sizes; and (3) for each 60 ounces of all the cherries there may be present not more than 1 cherry with a pit when all cherries are of extra large size.

(d) "Unstemmed and pitted" or "cocktail" is the style of sulfured cherries consisting of whole cherries of which not more than 7 percent, by weight, of all the cherries are cherries without the stems firmly attached and: (1) For each 40 ounces of all the cherries there may be present not more than 2 cherries with pits when all cherries are of small size or extra small size; (2) for each 40 ounces of all the cherries there may be present not more than 1 cherry with a pit when all cherries are of medium size, large size, or different sizes; and (3) for each 60 ounces of all the cherries there may be present not more than 1 cherry with a pit when all cherries are of extra large size.

(e) "Unclassified" consists of sulfured cherries which do not conform to any of the foregoing styles.

(f) "Pit" means an entire pit or portion thereof attached to a sulfured cherry or within the pit cavity.

§ 52.743 Recommended sizes of sulfured cherries.

(a) Although size is a factor in connection with some styles of sulfured cherries, it is not a factor of quality for the purpose of these grades. The size range of sulfured cherries varies on the basis of the diameter of the fruit. The diameter of the sulfured cherry is the minimum diameter of the fruit that will pass through a rigid ring of the same diameter without using pressure. The name designations of the various sizes are shown in the first column of Table No. I of this section. Sulfured cherries will be considered as meeting a particular designated size if not more than 10 percent, by weight, of all the cherries are 1 mm. smaller or 2 mm. smaller and not more than 10 percent, by weight, of all the cherries are 1 mm. larger or 2 mm. larger than the diameter range of the particular size designation: *Provided*, That not more than 1 percent by weight, of all cherries are no more than 2 mm. smaller than the minimum diameter for the designated size and not more than 1 percent, by weight, of all cherries are no more than 2 mm. larger than the maximum diameter for the designated size.

TABLE I—SIZES OF CHERRIES IN SULFURED CHERRIES

Name designation	Minimum and maximum diameter
Extra small	14 mm. to, and including, 16 mm.
Small	16 mm. to, and including, 18 mm.
Medium	18 mm. to, and including, 20 mm.
Large	20 mm. to, and including, 22 mm.
Extra large	22 mm. and over.

§ 52.744 Grades of sulfured cherries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of sulfured cherries that are clean; that possess a good color; that are practically free from defects; that possess a good character; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of sulfured cherries that are clean; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Seconds" is the quality of sulfured cherries that are clean, but for other reasons fail to meet the requirements of U.S. Grade B or U.S. Choice.

(d) "U.S. Combination grade" is the quality of sulfured cherries that are clean; and that with respect to color, absence of defects, and character meets the following requirements:

(1) Not less than 90 percent, by weight, of all the cherries, possess at least a reasonably good color and a reasonably good character and are free from misshapen cherries, cherries seriously damaged by mechanical injury and seriously blemished cherries; and

(2) Unless otherwise specified, at least 50 percent, by weight, of all the cherries, possess a good color and a good character; and are free from blemished cherries or seriously blemished cherries, misshapen cherries, and cherries damaged by mechanical injury or cherries seriously damaged by mechanical injury.

§ 52.745 Definition.

"Clean" means that the product is practically free from loose pits, leaves, detached stems, bark, fruit spurs, dirt or other foreign material.

FACTORS OF QUALITY

§ 52.746 Ascertaining the grade with respect to "U.S. Grade A" or "U.S. Fancy" and "U.S. Grade B" or "U.S. Choice."

(a) The grade of sulfured cherries is ascertained by considering, in addition to the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Absence of defects	40
Character	40
Total score	100

§ 52.747 Ascertaining the rating for each factor which is scored.

The essential variations within each factor which is scored are so described that the value may be ascertained and expressed numerically. The numerical range for the ratings of such factors is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.748 Color.

(a) (*A*) *classification.* Sulfured cherries that possess a good color may be given a score of 17 to 20 points. "Good color" means that the cherries possess a practically uniform color typical of well-bleached sulfured cherries for the variety.

(b) (*B*) *classification.* If the sulfured cherries possess a reasonably good color, a score of 14 to 16 points may be given. "Reasonably good color" means that the cherries possess a reasonably uniform color typical of reasonably well-bleached sulfured cherries for the variety. Sulfured cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule).

(c) (*SStd*) *classification.* Sulfured cherries that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points. Sulfured cherries that fall into this classification shall not be graded above U.S. Grade D or Seconds, regardless of the total score for the product (this is a limiting rule).

§ 52.749 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from misshapen cherries, cherries damaged or seriously damaged by mechanical injury, and cherries blemished or seriously blemished by discoloration, rain or solution cracks, bird pecks, pathological injury, insect injury or blemished by other means.

(1) "Misshapen cherries" means any deformed cherries or double cherries.

(2) "Cherries damaged by mechanical injury" means any pitter tear or pitter tears which materially affect the appearance of the cherry; any open pitter hole measuring more than ⅛ inch across, but not more than ³⁄₁₆ inch across, or open pitter holes aggregating more than ⅛ inch across, but not more than ³⁄₁₆ inch across; any pitter hole where there is a material loss of flesh; and other mechanical injury which materially affects the appearance of the cherry.

(3) "Cherries seriously damaged by mechanical injury" means any pitter tear or pitter tears which seriously affect the appearance of the cherry; any open pitter hole measuring more than ³⁄₁₆ inch across, or open pitter holes aggregating more than ³⁄₁₆ inch across, any pitter hole where there is a serious loss of flesh; and other mechanical injury which seriously affects the appearance of the cherry.

(4) "Blemished cherry" means any cherry which is affected by:

(i) Dark surface discoloration exceeding in the aggregate the area of a circle ³⁄₁₆ inch in diameter, but not exceeding in the aggregate ⅛ of the surface of the cherry;

(ii) Any rough surface areas which slightly affect the appearance of the cherry;

(iii) Light surface discoloration exceeding in the aggregate ⅛ of the surface of the cherry, but not exceeding in the aggregate ½ of the surface of the cherry;

(iv) Rain checks or rain cracks (*a*) in the stem basin more than ¼ inch in length, but not more than ½ inch in length, (*b*) any rain checks or rain cracks outside the stem basin more than 3/16 inch in length but not more than ⅜ inch in length;

(v) Any solution cracks or other blemish or combination of any blemishes which materially affect the appearance of the cherry. The term "blemished cherry" also means any cherry the flesh of which is materially discolored.

(5) "Seriously blemished cherry" means any cherry which is affected by:

(i) Dark surface discoloration exceeding in the aggregate ⅛ of the surface of the cherry;

(ii) Any rough surface areas which materially affect the appearance of the cherry;

(iii) Light surface discoloration exceeding in the aggregate ½ of the surface of the cherry;

(iv) Rain checks or rain cracks (*a*) in the stem basin more than ½ inch in length, (*b*) any rain checks or rain cracks outside the stem basin, more than 3/16 inch in length.

(v) Any solution cracks or other blemish or combination of any blemishes which seriously affect the appearance of the cherry. The term "seriously blemished cherry" also means any cherry the flesh of which is seriously discolored.

(b) (*A*) *classification.* Sulfured cherries that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that not more than a total of 10 percent, by weight, of cherries are misshapen cherries, cherries damaged by mechanical injury, seriously damaged by mechanical injury, blemished cherries or seriously blemished cherries of which not more than five percent, by weight, of all cherries are misshapen cherries, cherries seriously damaged by mechanical injury or seriously blemished cherries.

(c) (*B*) *classification.* Sulfured cherries that are reasonably free from defects may be given a score of 28 to 33 points. "Reasonably free from defects" means that not more than a total of 10 percent, by weight, of cherries are misshapen cherries, cherries seriously damaged by mechanical injury, or seriously blemished cherries. Sulfured cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule).

(d) (*SStd*) *classification.* Sulfured cherries that fail to meet the requirements of paragraph (c) of this section for any reason may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Seconds, regardless of the total score for the product (this is a limiting rule).

§ 52.750 Character.

(a) *General.* The factor of character refers to the firmness of the cherries and to the condition of the flesh.

(b) (*A*) *classification.* Sulfured cherries that possess a good character may be given a score of 34 to 40 points. "Good character" means that the cherries possess a firm fleshy texture, retain their approximate original shape, are not shriveled or watery, and do not show more than slight collapsed areas of flesh. To score in this classification, sulfured cherries may contain not more than five percent, by weight, of cherries which fail to meet requirements for "good character."

(c) (*B*) *classification.* If the sulfured cherries possess a reasonably good character, a score of 28 to 33 points may be given. Sulfured cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the cherries possess a reasonably firm texture, may have slightly lost their original shape may be slightly shriveled, or may show moderate collapsed areas of flesh. To score in this classification, sulfured cherries may contain not more than 10 percent, by weight, of cherries which fail to meet the requirements for "reasonably good character."

(d) (*SStd*) *classification.* Sulfured cherries that are soft, flabby, wrinkled leathery, or have materially lost their original shape, or show seriously collapsed areas of flesh, or fail to meet the requirements of paragraph (c) of this section for any reason may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Seconds, regardless of the total score for the product (this is a limiting rule).

§ 52.751 Ascertaining the grade with respect to U.S. Combination grade.

(a) The combination grade of sulfured cherries is ascertained by considering color, absence of defects, character, and the cleanliness of the product.

(b) The definition for cleanliness and the terms defined with respect to ascertaining "U.S. Grade A" or "U.S. Fancy" and "U.S. Grade B" or "U.S. Choice" outlined under the factors of color, absence of defects and character for these grades are also applicable for ascertaining the U.S. Combination grade.

LOT CERTIFICATION TOLERANCES

§ 52.752 Tolerances for certification of officially drawn samples for U.S. Combination grade of sulfured cherries.

(a) When certifying samples that have been officially drawn and which represent a specific lot of sulfured cherries, the precent, by weight, of cherries which possess at least a reasonably good color and a reasonably good character, and are free from misshapen cherries, cherries seriously damaged by mechanical injury, and seriously blemished cherries is computed by averaging the percent, by weight, of such cherries in all samples of the lot if:

(1) None of the samples in the lot contain less than 80 percent, by weight of such cherries.

(b) The percent, by weight, of cherries for the lot which possess a good color and a good character, and are free from blemished cherries or seriously blemished cherries, misshapen cherries and cherries damaged by mechanical injury or cherries seriously damaged by mechanical injury, is computed by averaging the percent, by weight, of such cherries in all samples of the lot if:

(1) None of the samples in the lot contains less than 35 percent, by weight, of such cherries.

§ 52.753 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET AND WORK SHEET

§ 52.754 Score sheet for sulfured cherries.

Size and kind of container ....

Container identification marks ....

Size of sample ....

Size of cherries ....

Style of pack ....

Similar varieties ....

Are clean ....

Factors			Score points
Color	20	(A)	17–20
		(B)	[1] 14–16
		(D)	[1] 0–13
Absence of defects	40	(A)	34–40
		(B)	[1] 28–33
		(D)	[1] 0–27
Character	40	(A)	34–40
		(B)	[1] 28–33
		(D)	[1] 0–27
Total score	100		

Grade ....

Size of lot covered ....

[1] Indicates limiting rule.

§ 52.755 Work sheet for sulfured cherries for grading on the basis of the U.S. Combination grade.

Size and kind of container ....

Container identification marks ....

Size of sample ....

Style of pack ....

Similar varieties ....

Are clean ....

Color	Good color—reasonably good color	Percent by weight
Absence of defects and character.	Possess a good character and are free from blemished or seriously blemished cherries, misshapen cherries and cherries damaged or seriously damaged by mechanical injury. Fail to meet requirements for reasonably good character, or are misshapen cherries, cherries seriously damaged by mechanical injury or seriously blemished cherries.	
Grade of sample	....	....
Grade of lot	....	....
Size of lot	....	....

Subpart—United States Standards for Grades of Canned Red Tart Pitted Cherries [1]

SOURCE: 39 FR 13963, Apr. 18, 1974, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY AND GRADES

§ 52.771 Identity.

"Canned red tart pitted cherries" is the product represented as defined in the standard of identity for canned cherries (21 CFR 145.125(a)), issued pursuant to the Federal Food, Drug, and Cosmetic Act, and packed in one of the liquid media specified in § 52.773; and is sealed in a hermetically sealed container and so processed by heat as to prevent spoilage.

§ 52.772 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned red tart pitted cherries that have at least the following attributes:

(1) At least a reasonably good color;

(2) Practically free from pits;

(3) Practically free from defects;

(4) Good character;

(5) Normal flavor and odor; and

(6) Score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

Canned red tart pitted cherries of this grade may contain not more than eight cherries per sample unit that are less than 9/16 inch (14 mm) in diameter.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of canned red tart pitted cherries that have at least the following attributes:

(1) Reasonably good color;

(2) Reasonably free from pits;

(3) Reasonably free from defects;

(4) Reasonably good character;

(5) Normal flavor and odor; and

(6) Score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

Canned red tart pitted cherries of this grade may contain not more than 15 cherries per sample unit that are less than $^{9}/_{16}$ inch (14 mm) in diameter.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of canned red tart pitted cherries that have at least the following attributes:

(1) Fairly good color;

(2) Fairly free from pits;

(3) Fairly free from defects;

(4) Fairly good character;

(5) Normal flavor and odor; and

(6) Score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

There is no size requirement for canned red tart pitted cherries of this grade.

(d) "Substandard" is the quality of canned red tart pitted cherries that fail to meet the requirements of "U.S. Grade C."

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[1] Compliance with the provisions of the standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

LIQUID MEDIA AND BRIX MEASUREMENTS

§52.773 Liquid media and Brix measurements.

(a) Brix measurement requirements for the liquid media in canned red tart pitted cherries are not incorporated in the grades of the finished product since sirup, or any other liquid medium, as such, is not a factor of quality for the purpose of the grades. The designation of liquid packing media and Brix measurements, where applicable, are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s).".	28° or more but not more than 45°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s).".	22° or more but less than 28°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s).".	18° or more but less than 22.
"Slightly sweetened water;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s).".	Less than 18°.
"In water"	Not applicable.
"In fruit juice(s) and water."	Do.
"In fruit juice(s)"	Do.

(b) The densities of the packing media, as listed in this section, are measured on the refractometer, expressed as percent by weight sucrose (degrees Brix) with correction for temperature to the equivalent at 20° C. (68° F.), but without correction for invert sugars or other substances. The Brix measurement of the packing media may be determined by any other method which gives equivalent results.

(c) Brix determination is made on the packing media 15 days or more after the cherries are canned or on the blended homogenized slurry of the comminuted entire contents of the container if canned for less than 15 days.

[39 FR 13963, Apr. 18, 1974, as amended at 41 FR 15020, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

FILL OF CONTAINER

§ 52.774 Fill of container.

(a) *FDA requirements.* Canned red tart pitted cherries shall meet the fill of container requirements as set forth in the regulations of the Food and Drug Administration (21 CFR 145.125(c)).

(b) *Recommended minimum drained weights*—(1) *General.* The minimum drained weight recommendations for the various container sizes and types of packing media as listed in Table I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades.

(2) *Definitions.*

Sample average—Average of all the drained weights of the sample containers representing a lot.

X_d—A specified minimum sample average drained weight.

LL—Lower limit for individual container drained weight.

(3) *Method for ascertaining drained weight.* The drained weight of canned red tart pitted cherries is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing eight meshes to the inch (0.0937 inch (2.3 mm), ±3 percent, square openings) so as to distribute the product evenly over the sieve. Without shifting the product, incline the sieve at an angle of 17° to 20° to facilitate drainage and allow to drain for two minutes. The weight of drained cherries is the weight of the sieve and product less the weight of the dry sieve. A sieve eight inches in diameter is used for No. 3 size containers (404 × 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than No. 3 size containers.

(4) *Compliance with recommended minimum drained weights.* A lot of canned red tart pitted cherries is considered as meeting the minimum drained weight recommendations when the following criteria are met:

(i) The sample average meets the specified minimum sample average drained weight (designated as "X_d" in Table I); and

(ii) The number of sample containers which fail to meet the minimum drained weight for individual containers (designated as "LL" in Table I) does not exceed the applicable acceptance number specified in Table II.

(c) *Recommended fill weights*—(1) *General.* The minimum fill weight recommendations for the various container sizes in Table III of this section are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purpose of these grades.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED RED TART PITTED CHERRIES

Container designation	Packed in water or cherry juice (ounces)		Packed in any sirup or slightly sweetened water (ounces)	
	LL	Xd	LL	Xd
No. 303 (303 × 406)	10.7	11.0	9.9	10.2
No. 303 Cylinder (303 × 509)	14.0	14.4	12.7	13.1
No. 2 (307 × 409)	13.1	13.5	12.3	12.7
No. 10 (603 × 700)	71.2	72.0	69.4	70.2

TABLE II—SINGLE SAMPLING PLANS AND ACCEPTANCE NUMBERS

Sample Size (No. of sample containers)	3	6	13	21	29	38	48	60
Acceptance numbers	0	1	2	3	4	5	6	7

(2) *Definitions.*

Subgroup	A group of sample containers representing a portion of a sample.
X'_{min}	A specified minimum lot average weight.
LWL^{x}	Lower warning limit for subgroup averages.
LRL_{x}	Lower reject limit for subgroup averages.
LWL	Lower warning limit for individual weight measurements.
LRL	Lower reject limit for individual weight measurements.
R′	A specified average range value.
R_{max}	A specified maximum range for subgroups.

(3) *Method for ascertaining fill weight.* The fill weight of canned red tart pitted cherries is determined in accordance with the U.S. Standards for Inspection by Variable and the U.S. Standards for Determination of Fill Weights.

(4) *Compliance with recommended fill weights.* Compliance with the recommended fill weights for canned red tart pitted cherries shall be in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED RED TART PITTED CHERRIES

Container designation	Fill weight values in ounces							
	X'_{min}	LWL_{x}	LRL_{x}	LWL	LRL	R′	R_{max}	Sampling allowance code
No. 303	12.9	12.6	12.4	12.2	11.8	0.80	1.70	F
No. 303 Cylinder	16.8	16.4	16.2	15.9	15.4	1.10	2.20	H
No. 2	15.8	15.4	15.2	14.9	14.4	1.10	2.20	H
No. 10	86.7	85.9	85.5	85.0	84.1	2.00	4.20	P

SAMPLE UNIT SIZE

§ 52.775 Sample unit size.

Compliance with requirements for the size and the various quality factors is based on the following sample unit sizes for the applicable factor:

(a) Size, color, pits, and character—20 ounces of drained cherries.

(b) Defects (other than harmless extraneous material)—100 cherries.

(c) Harmless extraneous material—The total contents of each container in the sample.

FACTORS OF QUALITY

§ 52.776 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of canned red tart pitted cherries is ascertained by considering the factor of flavor and odor of the product and the requirement for size (in U.S. Grade A and U.S. Grade B) which are not scored; the ratings for the factors of color, freedom from pits, defects, and character, which are scored; and the limiting rules which may be applicable.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Freedom from pits	20
Defects	30
Character	30
Total score	100

(c) *Definition.* "Normal flavor and odor" means that the flavor and odor are characteristic of canned red tart pitted cherries and that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.777 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.778 Color.

(a) (*A*) *classification.* Canned red tart pitted cherries that have a good color may be given a score of 18 to 20 points. "Good color" means a practically uniform color that is bright and typical of canned red tart pitted cherries which have been prepared and processed from properly ripened cherries.

(b) (*B*) *classification.* Canned red tart pitted cherries that have a reasonably good color may be given a score of 16 or 17 points. "Reasonably good color" means a reasonably uniform color, typical of canned red tart pitted cherries which have been properly prepared and processed and which color may range from a slight yellowish-red color to a slightly mottled reddish brown.

(c) (*C*) *classification.* Canned red tart pitted cherries that have a fairly good color may be given a score of 14 or 15 points. Canned red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a fairly uniform color typical of canned red tart pitted cherries which have been properly processed and which color may range from a brownish cast to mottled shades of brown.

(d) (*SStd.*) *classification.* Canned red tart pitted cherries that fail to meet the color requirements for U.S. Grade C may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.779 Freedom from pits.

(a) *General.* The factor of freedom from pits refers to the incidence of pits and pit fragments.

(b) *Definitions.* (1) A "pit," for the purposes of the allowances in this section, is a whole cherry pit or portions of pits computed as follows:

(i) A single piece of pit shell, whether or not within or attached to a whole cherry, that is larger than one-half pit shell is considered as one pit;

(ii) A single piece of pit shell, whether or not within or attached to a whole cherry, that is not larger than one-half pit shell is considered as one-half pit;

(iii) Pieces of pit shell, within or attached to a whole cherry, when their combined size is larger than one-half pit shell are considered as one pit; and

(iv) Pieces of pit shell, within or attached to a whole cherry, when their combined size is not larger than one-half pit shell are considered as one-half pit.

(2) "Drained cherries" means pitted cherries that have been drained of packing medium by the method prescribed in this subpart.

(c) (*A*) *classification*. Canned red tart pitted cherries that are practically free from pits may be given a score of 18 to 20 points. "Practically free from pits" means that the number of pits that may be present in the drained cherries does not exceed the allowances for this classification as set forth in Table IV.

(d) (*B*) *classification*. Canned red tart pitted cherries that are reasonably free from pits may be given a score of 16 or 17 points. Canned red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from pits" means that the number of pits that may be present does not exceed the allowances for this classification as set forth in Table IV.

(e) (*C*) *classification*. Canned red tart pitted cherries that are fairly free from pits may be given a score of 14 or 15 points. Canned red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from pits" means that the number of pits that may be present in the drained cherries does not exceed the allowances for this classification as set forth in Table IV.

(f) (*SStd.*) *classification*. Canned red tart pitted cherries that fail to meet the requirements of U.S. Grade C may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.780 Defects.

(a) *General*. The factor of defects refers to the degree of freedom from harmless extraneous material, mutilated cherries, and cherries blemished by scab, hail injury, discoloration, scar tissue, or by other means.

(1) "Cherry" means a whole cherry, whether or not pitted, or portions of such cherries which in the aggregate approximate the average size of the cherries.

(2) "Harmless extraneous material" means any vegetable substance (including, but not being limited to, a leaf or a stem, and any portions thereof) that is harmless.

(3) "Mutilated cherry" means a cherry that is so pitter-torn or damaged by other means that the entire pit cavity is exposed and the appearance of the cherry is seriously affected.

(4) "Minor blemished cherry" means any cherry blemished with skin discoloration (other than scald) having an aggregate area of a circle 9/32 inch (7 mm) or less in diameter which more than slightly affects the appearance of the cherry but does not extend into the fruit tissue.

(5) "Blemished cherry" means any cherry blemished by skin discoloration (other than scald) which in the aggregate exceeds the area of a circle 9/32 inch (7 mm) in diameter. A cherry affected by skin discoloration extending into the fruit tissue or by scab, hail injury, scar tissue, or other abnormality, regardless of size, is considered a blemished cherry.

(b) (*A*) *classification*. Canned red tart pitted cherries that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the number of defects that may be present does not exceed the number specified for the type of defects in Table IV.

(c) (*B*) *classification*. Canned red tart pitted cherries that are reasonably free from defects may be given a score of 24 to 26 points. Canned red tart pitted cherries that fall into this classification may not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the number of defects that may be present does not exceed the number specified for the type of defects in Table IV.

(d) (*C*) *classification*. If the canned red tart pitted cherries are fairly free from defects, a score of 21 to 23 points may be given. Canned red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the number of defects that may be present does not exceed the number specified for the type of defects in Table IV.

(e) (*SStd.*) *classification.* Canned red tart pitted cherries that fail to meet the requirements for Grade C for any reason may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.781 Character.

(a) *General.* The factor of character refers to the physical characteristics of the flesh of the cherries.

(b) (*A*) *classification.* Canned red tart pitted cherries that have a good character may be given a score of 27 to 30 points. "Good character" means that the cherries are thick-fleshed and have a firm, tender texture.

(c) (*B*) *classification.* Canned red tart pitted cherries that have a reasonably good character may be given a score of 24 to 26 points. Canned red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the cherries may be reasonably thick-fleshed and may be slightly soft.

(d) (*C*) *classification.* Canned red tart pitted cherries that have a fairly good character may be given a score of 21 to 23 points. Canned red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the cherries may be thin-fleshed, and may be soft but not mushy, or slightly tough but not leathery.

(e) (*SStd.*) *classification.* Canned red tart pitted cherries that fail to meet the requirements for U.S. Grade C may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

Allowances for Quality Factors

§ 52.782 Allowances for quality factors.

TABLE IV—ALLOWANCES FOR QUALITY FACTORS

Factor	Sample unit size	Maximum number permissible for the respective grade					
		A	A	B	B	C	C
Pits	20 ozs	Not more than 2 in any sample unit.	Sample average 1 per 40 ozs.	Not more than 3 in any sample unit.	Sample average 1 per 30 ozs.	4 or more in any sample unit.	Sample average 1 per 20 ozs.
Defects:	100 cherries						
Total—multilated, plus minor blemished plus blemished, of which		10		15		20	
Blemished—limited to		3		7		15	
Harmless extraneous material.	Total contents	Average 1 piece per 60 oz. net contents.		Average 1.5 pieces per 60 oz. net contents.		Average 3 piece per 60 oz. net contents.	

Lot Compliance

§ 52.783 Ascertaining the grade of a lot.

The grade of a lot of canned red tart pitted cherries covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.784 Score sheet for canned red tart pitted cherries.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Sirup designation (extra heavy, heavy, etc.) ....
Brix measurement ....
Size [1] ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	16–17
		(C)	[2] 14–15
		(SStd.)	[2] 0–13
Freedom from pits.	20	(A)	18–20
		(b)	[2] 16–17
		(C)	[2] 14–15
		(SStd.)	[2] 0–13
Freedom from defects.	30	(A)	27–30
		(B)	[2] 24–26
		(C)	[2] 21–23
		(SStd.)	[2] 0–20
Character	30	(A)	27–30
		(B)	[2] 24–26
		(C)	[2] 21–23
		(SStd.)	[2] 0–20
Total score	100		

Normal flavor ....
Grade ....

[1] See size limitation for U.S. Grade A and U.S. Grade B.
[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Red Tart Pitted Cherries

SOURCE: 39 FR 23235, June 27, 1974, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.801 Product description.

Frozen red tart pitted cherries is the food prepared from properly matured cherries of the domestic (Prunus cerasus) red sour varietal group which have been washed, pitted, sorted, and properly drained; may be packed with or without a nutritive sweetened packing medium or any other substance permitted under the Federal Food, Drug, and Cosmetic Act, and are frozen and stored at temperatures necessary for the preservation of the product.

§ 52.802 Grades of frozen red tart pitted cherries.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen red tart pitted cherries of which not more than five (5) cherries per sample unit may be less than 9/16 inch (14 mm) in diameter, and that:

(1) Possess a good red color;

(2) Are practically free from pits;

(3) Are practically free from defects;

(4) Have a good character;

(5) Possess a normal flavor; and

(6) Score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of frozen red tart pitted cherries of which not more than ten (10) cherries per sample unit may be less than 9/16 inch (14 mm) in diameter, and that:

(1) Possess a reasonably good red color;

(2) Are reasonably free from pits;

(3) Are reasonably free from defects;

(4) Have a reasonably good character;

(5) Possess a normal flavor; and

(6) Score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of frozen red tart pitted cherries that:

(1) Possess a fairly good red color;

(2) Are fairly free from pits;

(3) Are fairly free from defects;

(4) Have a fairly good character;

(5) Possess a normal flavor; and

(6) Score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen red tart pitted cherries that fail to meet the requirements of U.S. Grade C.

SAMPLE UNIT SIZE

§ 52.803 Sample unit size.

Compliance with requirements for size and the various quality factors is based on the following sample unit sizes for the applicable factor:

(a) Pits, character, and harmless extraneous material—20 ounces of drained cherries.

(b) Size, color, and defects (other than harmless extraneous material)—100 cherries.

FACTORS OF QUALITY

§ 52.804 Ascertaining the grade of a sample unit.

(a) The grade of frozen red tart pitted cherries is determined immediately after thawing to the extent that the cherries may be separated easily and the cherries are free from ice and solidified packing media. The grade is determined by considering in addition to the requirements of the respective grade (including the requirement of the size in U.S. Grade A and U.S. Grade B), the respective ratings of the factors of color, pits, absence of defects, character, the total score, and the limiting rules which may be applicable.

(b) The relative importance of each factor is expressed numerically on a scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	30
Freedom from pits	20
Freedom from defects	20
Character	30
Total score	100

(c) "Normal flavor" means that the flavor is characteristic of frozen red tart pitted cherries and that the product is free from objectionable flavors of any kind.

§ 52.805 Ascertaining the rating for each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, "27 to 30 points" means 27, 28, 29 or 30 points).

§ 52.806 Color.

(a) (*A*) *Classification.* Frozen red tart pitted cherries that possess a good red color may be given a score of 27 to 30 points. "Good red color" means that the frozen cherries possess a color that is bright and typical of properly ripened cherries and that is practically uniform in that the number of cherries that vary markedly from this color due to oxidation, improper processing, or other causes, or that are undercolored, does not exceed the number specified in Table I.

(b) (*B*) *Classification.* Frozen red tart pitted cherries that possess a reasonably good red color may be given a score of 24 to 26 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good red color" means that the cherries possess a color that is reasonably bright and typical of properly ripened cherries and that is reasonably uniform in that the number of cherries that vary markedly from this color due to oxidation, improper processing, or other causes, or that are undercolored, does not exceed the number specified in Table I.

(c) (*C*) *Classification.* If the frozen red tart pitted cherries possess a fairly good red color, a score of 21 to 23 points may be given. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good red color" means that the frozen cherries possess a color that is fairly bright and typical of properly ripened cherries and that is fairly uniform in that the number of cherries that vary markedly from this color due to oxidation, improper processing, or other causes, or that are undercolored, does not exceed the number specified in Table I.

(d) (*SStd.*) *Classification.* Frozen red tart pitted cherries that fail to meet the requirements of U.S. Grade C may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.807 Freedom from pits.

(a) *General.* The factor of freedom from pits refers to the incidence of pits and pit fragments.

(b) *Definitions.* (1) A "pit" for the purpose of the allowances in this subpart is a whole pit or portions of pits computed as follows:

(i) A single piece of pit shell, whether or not within or attached to a whole cherry, that is larger than one-half pit shell is considered as one pit;

(ii) A single piece of pit shell, whether or not within or attached to a whole cherry, that is not larger than one-half pit shell is considered as one-half pit;

(iii) Pieces of pit shell, within or attached to a whole cherry, when their combined size is larger than one-half pit shell are considered as one pit; and

(iv) Pieces of pit shell, within or attached to a whole cherry, when their combined size is not larger than one-half pit shell are considered as one-half pit.

(2) "Drained cherries" means pitted cherries that are substantially free from any adhering sirup, sugar, or other packing medium.

(c) (*A*) *Classification.* Frozen red tart pitted cherries that are practically free from pits may be given a score of 18 to 20 points. "Practically free from pits" means that the number of pits that may be present does not exceed the allowances for this classification specified in Table I.

(d) (*B*) *Classification.* Frozen red tart pitted cherries that are reasonably free from pits may be given a score of 16 or 17 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from pits" means that the number of pits that may be present does not exceed the number specified in Table I.

(e) (*C*) *Classification.* Frozen red tart pitted cherries that are fairly free from pits may be given a score of 14 or 15 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from pits" means that the number of pits that may be present does not exceed the number specified in Table I.

(f) (*SStd.*) *Classification.* Frozen red tart pitted cherries that fail to meet the requirements for U.S. Grade C may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.808 Freedom from defects.

(a) *General.* The factor of freedom from defects refers to the degree of freedom from harmless extraneous material, mutilated cherries, and cherries blemished by scab, hail injury, discoloration, scar tissue, or by other means.

(1) "Cherry" means a whole cherry, whether or not pitted, or portions of such cherries which in the aggregate approximate the average size of the cherries.

(2) "Harmless extraneous material" means any vegetable substance (including, but not being limited to, a leaf or a stem and any portions thereof) that is harmless.

(3) "Mutilated cherry" means a cherry that is so pitter-torn or damaged by other means that the entire pit cavity is exposed and the appearance of the cherry is seriously affected.

(4) "Minor blemished cherry" means any cherry blemished with discoloration (other than scald) having an aggregate area of a circle $\frac{9}{32}$ inch (7 mm) or less in diameter which more than slightly affects the appearance of the cherry but does not extend into the fruit tissue.

(5) "Blemished cherry" means any cherry blemished by skin discoloration (other than scald) which in the aggregate exceeds the area of a circle $\frac{9}{32}$ inch (7 mm) in diameter. A cherry affected by skin discoloration extending into the fruit tissue or by scab, hail injury, scar tissue, or other abnormality, regardless of size, is considered a blemished cherry.

(b) (*A*) *Classification.* Frozen red tart pitted cherries that are practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means that the number of defects that may be present does not exceed the number specified for the applicable type of defect in Table I.

(c) (*B*) *Classification.* Frozen red tart pitted cherries that are reasonably free from defects may be given a score of 16 or 17 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the number of defects that may be present does not exceed the number specified for the applicable type of defect in Table I.

(d) (*C*) *Classification.* Frozen red tart pitted cherries that are fairly free from defects may be given a score of 14 or 15 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the number of defects that may be present does not exceed the number specified for the applicable type of defect in Table I.

(e) (*SStd.*) *Classification.* Frozen red tart pitted cherries that fail to meet the requirements for Grade C may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.809 Character.

(a) *General.* The factor of character refers to the physical characteristics of the flesh of the cherries.

(b) (*A*) *Classification.* Frozen red tart pitted cherries that have a good character may be given a score of 27 to 30 points. "Good character" means that the cherries are thick-fleshed and have a firm, tender texture.

(c) (*B*) *Classification.* Frozen red tart pitted cherries that have a reasonably good character may be given a score of 24 to 26 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the cherries may be reasonably thick-fleshed and slightly soft.

(d) (*C*) *Classification.* Frozen red tart pitted cherries that have a fairly good character may be given a score of 21 to 23 points. Frozen red tart pitted cherries that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the cherries may be thin-fleshed and may be soft but not mushy, or slightly tough but not leathery.

(e) (*SStd.*) *Classification.* Frozen red tart pitted cherries that fail to meet the requirements for Grade C may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

ALLOWANCES FOR QUALITY FACTORS

§ 52.810 Allowances for quality factors.

TABLE I—ALLOWANCES FOR QUALITY FACTORS

Factor	Sample unit size	Maximum number permissible for the respective grade		
		A	B	C
Color:				
Very markedly or undercolored	100 cherries	12	18	25
Pits	20 ozs	Not more than 2 in any sample unit. Sample average 1 per 40 ozs.	Not more than 3 in any sample unit. Sample average 1 per 30 ozs.	4 or more in any sample unit. Sample average 1 per 20 ozs.
Defects:				
Total-mutilated, minor blemished, and blemished of which.	100 cherries	10	15	20.

TABLE I—ALLOWANCES FOR QUALITY FACTORS—Continued

Factor	Sample unit size	Maximum number permissible for the respective grade		
		A	B	C
Blemished—limited to.		3	7	15.
Harmless extraneous material.	20 ozs	Average 1 piece per 60 oz. net contents.	Average 1 piece per 40 oz. net contents.	Average 1 piece per 20 oz. net contents.

LOT COMPLIANCE

§ 52.811 Ascertaining the grade of a lot.

The grade of a lot of frozen red tart pitted cherries covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.83).

SCORE SHEET

§ 52.812 Score sheet for frozen red tart pitted cherries.

Size and kind of container ....
Container mark or identification ....
Label (style of pack, ratio of fruit to sugar, etc., if shown).
Net weight (ounces) ....
Size [1] ....

Factor		Score points	
Color	30	(A)	27-30
		(B)	[2] 24-26
		(C)	[2] 21-23
		(SStd.)	[2] 0-20
Freedom from pits	20	(A)	18-20
		(B)	[2] 16-17
		(C)	[2] 14-15
		(SStd.)	[2] 0-13
Freedom from defects.	20	(A)	18-20
		(B)	[2] 16-17
		(C)	[2] 14-15
		(SStd.)	[2] 0-13
Character	30	(A)	27-30
		(B)	[2] 24-26
		(C)	[2] 21-23
		(SStd.)	[2] 0-20
Total score	100		

Normal flavor ....
Grade ....

[1] See size limitation for U.S. Grade A and U.S. Grade B.
[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Sweet Cherries

SOURCE: 38 FR 13322, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, TYPES, STYLES, AND GRADES

§ 52.821 Product description.

(a) "Canned sweet cherries" is the product represented as defined in the Standards of Identity for Canned Cherries (21 CFR 145.126(a) and 145.126) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[41 FR 15020, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.822 Types.

(a) "Light" type are of the light sweet varietal group and includes, but is not limited to, such varieties known as Royal Anne.

(b) "Dark" type are of the dark sweet varietal group and includes, but is not limited to, such varieties known as Bing, Black Republican, Schmidt, and Lambert.

§ 52.823 Styles.

(a) "Unpitted" sweet cherries are stemmed cherries without the pits removed.

(b) "Pitted" sweet cherries are stemmed cherries with the pits removed.

§ 52.824 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned sweet cherries that are practically free from defects; that possess a good character; that possess a normal flavor and odor; and that are of such quality with respect to color and uniformity of size as to score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned sweet cherries that are reasonably free from defects; that possess a reasonably good character; that possess a normal flavor and odor; and that are of such quality with respect to color and uniformity of size as to score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned sweet cherries that possess a fairly good color; that are fairly uniform in size; that are fairly free from defects; that possess a fairly good character; that possess a normal flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

"Substandard" is the quality of canned sweet cherries that fail to meet the requirements of U.S. Grade C or U.S. Standard and is the quality of canned sweet cherries that may or may not meet the minimum standard of quality for canned cherries issued pursuant to the Federal Food, Drug, and Cosmetic Act.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.825 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned sweet cherries are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurement, as applicable, for the respective designations are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s).".	25° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s).".	20° or more but less than 25°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s).".	16° or more but less than 20°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s).".	Less than 16°.
"In fruit juice(s) and water."	Not applicable.
"In water"	Do.
"In fruit juice(s)"	Do.
"Artificially sweetened"	Do.

[38 FR 13322, May 21, 1973, as amended at 41 FR 15020, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.826 Fill of container.

The standard fill of container for canned sweet cherries is the maximum quantity of cherries which can be sealed in the container and processed by heat to prevent spoilage, without crushing such ingredient. Canned sweet cherries that do not meet this requirement are "Below Standard in Fill."

§ 52.827 Recommended minimum drained weights.

(a) *General.* The minimum drained weight recommendations in table I are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining drained weights.* The drained weight of canned sweet cherries is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-inch ± 3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and sweet cherries less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 × 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definition of symbols.* (1) X_a—the average drained weight of all the sample units in the sample.

(2) LL—lower limit for drained weights of individual sample units.

(d) *Compliance with recommended drained weights.* A lot of canned sweet cherries is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended minimum average drained weight (designated as "X_a" in Table I); and

(2) The number of sample units which fail to meet the recommended drained weight lower limit for individuals (designated as "LL" in Table I) does not exceed the applicable acceptance number specified in Table II.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR PITTED AND UNPITTED CANNED SWEET CHERRIES

Container designations (metal unless other stated)	Container size—overall dimensions		Overflow capacity (fluid ounces)	In extra heavy sirups and in declared "dietetic packs" whether or not packed in water (ounces)		In heavy sirups (ounces)		In light sirup and in slightly sweetened water or juice (ounces)		In water (ounces)	
	Diameter (inches)	Height (inches)		LL	X_a	LL	X_a	LL	X_a	LL	X_a
8Z tall	211	304		4.3	4.7	4.6	5.0	4.8	5.2	4.8	5.2
No. 300	300	407		8.4	8.9	8.7	9.2	8.2	8.7	8.2	8.7
No. 1 tall	301	411		9.0	9.7	9.3	10.0	9.5	10.2	9.5	10.2
No. 303	303	406		9.0	9.7	9.3	10.0	9.5	10.2	9.5	10.2
No. 303 glass			17.0	9.0	9.7	9.3	10.0	9.5	10.2	9.5	10.2
No. 2	307	400		11.3	12.0	11.8	12.5	12.0	12.7	12.0	12.7
No. 2½	401	411		16.6	17.5	17.1	18.0	17.6	18.5	17.6	18.5
No. 2½ glass			28.35	16.3	17.2	16.8	17.7	17.3	18.2	17.3	18.2
No. 10	603	700		61.7	64.5	63.7	66.5	68.2	70.0	68.2	70.0

TABLE II—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29	38	48	60	72
Acceptance No.	0	1	2	3	4	5	6	7	8

§ 52.828 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations specified in tables III and IV are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weight.* Fill weight is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the minimum lot average fill weight.

LWL_x means the lower warning limit for subgroup averages.

LRL_x means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R' means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the sampling allowance chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE III—RECOMMENDED FILL-WEIGHT VALUES, CANNED LIGHT SWEET CHERRIES

Container designation (metal, unless otherwise designated)	X'_{min}	LWL_1	LRL_1	LWL	LRL	R'	R_{max}	Sampling allowance code
Unpitted								
8Z tall	5.4	5.2	5.0	4.9	4.6	0.6	1.3	D
No. 300	9.6	9.3	9.1	8.9	8.5	0.9	1.9	F
No. 1 tall	10.7	10.3	10.1	9.9	9.5	1.0	2.1	G
No. 303	10.7	10.3	10.1	9.9	9.5	1.0	2.1	G
No. 303 glass	10.7	10.3	10.1	9.9	9.5	1.0	2.1	G
No. 2	13.0	12.6	12.4	12.1	11.6	1.1	2.3	H
No. 2½ glass	18.8	18.3	18.0	17.7	17.1	1.3	2.7	J
No. 2½	19.0	18.5	18.2	17.9	17.3	1.3	2.7	J
No. 10	71.5	70.5	70.0	69.3	68.2	2.6	5.4	T
Pitted								
8Z tall	5.5	5.3	5.1	4.9	4.7	0.6	1.3	D
No. 300	9.8	9.5	9.3	9.1	8.7	0.9	1.9	F
No. 1 tall	10.9	10.5	10.3	10.1	9.7	1.0	2.1	G
No. 303	10.9	10.5	10.3	10.1	9.7	1.0	2.1	G
No. 303 glass	10.9	10.5	10.3	10.1	9.7	1.0	2.1	G
No. 2	13.3	12.9	12.7	12.4	11.9	1.1	2.3	H
No. 2½ glass	19.2	18.7	18.4	18.1	17.5	1.3	2.7	J
No. 2½	19.4	18.9	18.6	18.3	17.7	1.3	2.7	J
No. 10	73.0	72.0	71.5	70.8	69.7	2.6	5.4	T

TABLE IV—RECOMMENDED FILL-WEIGHT VALUES CANNED DARK SWEET CHERRIES

Container designation (metal, unless otherwise designated)	X'_{min}	LWL_1	LRL_1	LWL	LRL	R'	R_{max}	Sampling allowance code
Unpitted								
8Z tall	5.4	5.2	5.0	4.9	4.6	0.6	1.2	D
No. 300	9.6	9.2	9.0	8.8	8.4	.9	2.0	G
No. 1 tall	10.7	10.3	10.1	9.8	9.3	1.1	2.2	H
No. 303	10.7	10.3	10.1	9.8	9.3	1.1	2.2	H
No. 303 glass	10.7	10.3	10.1	9.8	9.3	1.1	2.2	H
No. 2	13.0	12.5	12.3	12.0	11.5	1.2	2.5	I
No. 2½ glass	18.8	18.3	18.0	17.7	17.1	1.3	2.7	J
No. 2½	19.0	18.5	18.2	17.9	17.3	1.3	2.7	J
No. 10	71.5	70.4	69.9	69.1	67.9	2.8	5.9	U
Pitted								
8Z tall	5.5	5.3	5.1	5.0	4.7	0.6	1.2	D
No. 300	9.8	9.4	9.2	9.0	8.6	.9	2.0	G
No. 1 tall	10.9	10.5	10.3	10.0	9.5	1.1	2.2	H
No. 303	10.9	10.5	10.3	10.0	9.5	1.1	2.2	H
No. 303 glass	10.9	10.5	10.3	10.0	9.5	1.1	2.2	H
No. 2	13.3	12.8	12.6	12.3	11.8	1.2	2.5	I
No. 2½ glass	19.2	18.7	18.4	18.1	17.5	1.3	2.7	J
No. 2½	19.4	18.9	18.6	18.3	17.7	1.3	2.7	J
No. 10	73.0	71.9	71.4	70.6	69.4	2.8	5.9	U

[38 FR 13322, May 21, 1973; 38 FR 15617, June 14, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

FACTORS OF QUALITY

§ 52.829 Ascertaining the grade.

(a) The grade of canned sweet cherries is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, uniformity of size, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	30
Uniformity of size	20
Absence of defects	30
Character	20
Total score	100

(c) "Normal flavor and odor" means that the canned sweet cherries are free from objectionable flavors and objectionable odors of any kind.

§ 52.830 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.831 Color.

(a) *General.* The factor of color refers to the color typical of the varietal group—either light sweet or dark sweet; and to the intensity and brightness of such characteristic color.

(b) (*A*) *classification.* Canned sweet cherries that possess a good color may be given a score of 27 to 30 points. "Good color" means that the cherries are bright and possess a color typical of well-matured cherries of similar varieties which have been properly processed; that in light sweet cherries, the basic background color, exclusive of blush, is a pinkish-yellow to pale amber color and that the blush appears as a surface color ranging from very light pinkish-tan to tannish-brown; and that in dark sweet cherries, the basic background color is a typical deep-red to purple-red or purple-black.

(c) (*B*) *classification.* If the canned sweet cherries possess a reasonably good color, a score of 24 to 26 points may be given. "Reasonably good color" means that the cherries possess a color typical of reasonably well-matured cherries of similar varieties which have been properly processed; that in light sweet cherries, the basic background color, exclusive of blush, is a pinkish-yellow to amber color which may be no more than slightly dull and that the blush appears as a surface color ranging from tan to tannish-brown; and that in dark sweet cherries, the basic background color is a typical deep red to purple-red or purple-black which may be no more than slightly dull.

(d) (*C*) *classification.* If the canned sweet cherries possess a fairly good color, a score of 21 to 23 points may be given. Canned sweet cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the cherries possess a color typical of fairly well-matured cherries of similar varieties which have been properly processed; that in light sweet cherries, the basic background color and blush may be variable or may be slightly dull but is not off-color; and that in dark sweet cherries, the cherries may possess a slightly dull deep red to slightly dull purple-red color or slightly dull purple-black color that may be variable but is not off-color.

(e) (*SStd*) *classification.* Canned sweet cherries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.832 Uniformity of size.

(a) *General.* The factor of uniformity of size refers to the uniformity of diameters in pitted and unpitted cherries, and to the variation of weight and minimum weight in unpitted cherries.

(1) "Diameter" of a cherry is the diameter of a rigid round hole through which the cherry will just pass without using force. In pitted cherries, the diameter is that which approximates the apparent original size had the cherry not been pitted but does not apply to any pitter-torn cherries.

(b) (*A*) *classification*. Canned sweet cherries that are practically uniform in size may be given a score of 18 to 20 points. "Practically uniform in size" means that:

(1) *In unpitted cherries*. (i) The weight of each cherry is not less than one-tenth oz (2.84 grams);

(ii) The weight of the largest cherry is not more than twice the weight of the smallest cherry; and

(iii) The diameter of the cherry with the greatest diameter may exceed the diameter of the cherry with the smallest diameter by not more than three-sixteenths in.; and in 85 percent, by count, of all the cherries with the most uniform diameters the diameter of the cherries with the greatest diameters may exceed the diameter of the cherries with the smallest diameters by not more than one-sixteenth in.

(2) *In pitted cherries*. (i) The diameter of the cherry with the greatest diameter may exceed the diameter of the cherry with the smallest diameter by not more than three-sixteenths in; and in 85 percent, by count, of all the cherries with the most uniform diameters the diameter of the cherries with the greatest diameters may exceed the diameter of the cherries with the smallest diameters by not more than one-sixteenth in.

(c) (*B*) *classification*. If the canned sweet cherries are reasonably uniform in size, a score of 16 or 17 points may be given. "Reasonably uniform in size" means that:

(1) *In unpitted cherries*. (i) The weight of each cherry is not less than one-tenth oz (2.84 grams);

(ii) The weight of the largest cherry is not more than twice the weight of the smallest cherry; and

(iii) The diameter of the cherry with the greatest diameter may exceed the diameter of the cherry with the smallest diameter by not more than three-sixteenths in.; and in 85 percent, by count, of all the cherries with the most uniform diameters the diameter of the cherries with the greatest diameters may exceed the diameter of the cherries with the smallest diameters by not more than one-eighth in.

(2) *In pitted cherries*. (i) The diameter of the cherry with the greatest diameter may exceed the diameter of the cherry with the smallest diameter by not more than three-sixteenths in.; and in 85 percent, by count, of all the cherries with the most uniform diameters the diameter of the cherries with the greatest diameters may exceed the diameter of the cherries with the smallest diameters by not more than one-eighth in.

(d) (*C*) *classification*. If the canned sweet cherries are fairly uniform in size, a score of 14 or 15 points may be given. Canned sweet cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size" means that:

(1) *In unpitted cherries*. (i) The weight of each cherry is not less than one-tenth oz (2.84 grams);

(ii) The weight of the largest cherry is not more than twice the weight of the smallest cherry; and

(iii) The cherries may vary in diameter measurements.

(2) *In pitted cherries*. (i) The cherries may vary in diameter measurements.

(e) (*SStd*) *classification*—Canned "unpitted" sweet cherries which fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points, shall not be graded above Substandard (this is a limiting rule), and are also "Below Standard in Quality" for the applicable reasons:

(1) "Small"; and/or

(2) "Mixed sizes".

§ 52.833 Absence of defects.

(a) *General*. The factor of absence of defects refers to the degree of freedom from harmless extraneous material; from portions of stems; from pits or portions thereof in pitted style; from slightly damaged, damaged, seriously damaged, slightly misshapen, misshapen, blemished, and seriously blemished cherries; and from any other defects which detract from the appearance or edibility of the product. Processing cracks are not considered as defects but are considered under the factor of character (§ 52.834).

(1) "Cherry" means a whole cherry, whether or not pitted, or portions of such cherries which in the aggregate approximate the average size of a cherry.

(2) "Harmless extraneous material" means any vegetable substance (including, but not limited to, a leaf or portion thereof, a stem or portion thereof longer than one-half in.) that is harmless.

(3) "Portions of cherry stems," whether loose or attached, means such portions that are one-half in. or less and such portions are considered as a defect separate from "harmless extraneous material."

(4) A "pit" is considered as a defect only in the style of pitted cherries and means a whole pit or portions of pits computed as follows:

(i) A single piece of pit shell, whether or not within or attached to a whole cherry, that is larger than one-half pit shell is considered as one pit;

(ii) A single piece of pit shell, whether or not within or attached to a whole cherry, that is not larger than one-half pit shell is considered as one-half pit;

(iii) Pieces of pit shell, within or attached to a whole cherry, when their combined size is larger than one-half pit shell are considered as one pit; and

(iv) Pieces of pit shell, within or attached to a whole cherry, when their combined size is not larger than one-half pit shell are considered as one-half pit.

(5) "Slightly damaged" means any injury other than blemishes which affects the appearance of the cherry, and includes:

(i) Circular cracks with slight discoloration, such as "rain checks", confined entirely within the stem basin and more than one-fourth in but not more than one-half in., in length;

(ii) Cracks with slight discoloration, such as "rain checks" outside the stem basin and more than three-sixteenths in. but not more than three-eighths in. in length;

(iii) Mutilated cherries in unpitted style whereby the cherry is seriously torn at the stem and that such torn area exceeds that of a circle one-fourth in. in diameter; and mutilated cherries in pitted style whereby the cherry is so pitter-torn or so damaged by other similar means that the entire pit cavity is exposed and the appearance of the cherry is seriously affected.

(6) "Damaged" means any injury other than blemishes which materially affects the appearance of the cherry and includes:

(i) Circular cracks with discoloration, such as "rain checks", confined entirely within the stem basin and more than one-half in. in length; and

(ii) Cracks with discoloration, such as "rain checks", outside the stem basin and more than three-eighths in. in length.

(7) "Seriously damaged" means damaged to the extent that the appearance or edibility of the cherry is seriously affected.

(8) "Slightly misshapen" cherries include, but is not limited to, cherries which are slightly deformed or in which there is a cleavage (or deep furrow) with the skin unbroken at the suture extending more than three-sixteenths in. but no more than one-half the length from the stem cavity to the apex.

(9) "Misshapen" cherries means cherries which are deformed to the extent that the appearance is materially affected and includes, but is not limited to "double" cherries in unpitted style and cherries in which there is a cleavage (or deep furrow) with the skin unbroken at the suture extending more than one-half the length from the stem cavity to the apex.

(10) "Blemished" means any blemished areas on the skin, which singly or in the aggregate, materially affect the appearance of the cherry; and includes:

(i) Such surface blemishes having an aggregate area exceeding that of a circle three-sixteenths in. in diameter, not extending into the fruit tissue but which materially affect the appearance of the cherry; or

(ii) Such blemishes having an aggregate area equivalent of, or less than, that of a circle three-sixteenths in. in diameter and extending into the fruit tissue so that the flesh is materially discolored.

(11) "Seriously blemished" means blemished to the extent that the appearance or edibility of the cherry is seriously affected.

(b) (*A*) *classification*. Canned sweet cherries that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the canned sweet cherries are practically free from any defects not specifically mentioned that affect the appearance or edibility of the product and that for the applicable style not more than the following defects or defective units may be present:

(1) One piece of harmless extraneous material for each 60 oz of net contents;

(2) One portion of cherry stem for each 20 oz of net contents;

(3) In pitted style, 1 pit for each 20 oz of net contents; and

(4) A total of 10 percent, by count, of the cherries may be slightly damaged, damaged, seriously damaged, slightly misshapen, misshapen, blemished, seriously blemished, or any combination thereof but not more than 5 percent, by count, of the cherries may be damaged, seriously damaged, misshapen, blemished, seriously blemished, or any combination thereof: *Provided*, That not more than 2 percent, by count, of the cherries may be seriously blemished and seriously damaged.

(c) (*B*) *classification*. If the canned sweet cherries are reasonably free from defects, a score of 24 to 26 points may be given. Canned sweet cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the canned sweet cherries are reasonably free from any defects not specifically mentioned that affect the appearance or edibility of the product and that for the applicable style not more than the following defects or defective units may be present:

(1) One piece of harmless extraneous material for each 40 oz of net contents;

(2) A total of 5 portions of cherry stems but not more than 1 portion of cherry stem may be longer than one-fourth in. but not longer than one-half in. for each 20 oz of net contents;

(3) In pitted style, 1 pit for each 20 oz. of net contents; and

(4) A total of 20 percent, by count, of the cherries may be slightly damaged, damaged, seriously damaged, slightly misshapen, misshapen, blemished, seriously blemished, or any combination thereof but not more than 10 percent, by count, of the cherries may be damaged, seriously damaged, misshapen, blemished, seriously blemished, or any combination thereof: *Provided*, That not more than 4 percent, by count, of the cherries may be seriously blemished and seriously damaged.

(d) (*C*) *classification*. If the canned sweet cherries are fairly free from defects, a score of 21 to 23 points may be given. Canned sweet cherries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the canned sweet cherries are fairly free from any defects not specifically mentioned that affect the appearance or edibility of the product and that for the applicable style not more than the following defects or defective units may be present:

(1) One piece of harmless extraneous material for each 20 oz of net contents;

(2) A total of 10 portions of cherry stems but not more than 3 portions of cherry stems, each of which may be longer than one-fourth in. but not longer than one-half in. for each 20 oz. of net contents;

(3) In pitted style, 1 pit for each 20 oz. of net contents; and

(4) A total of 30 percent, by count, of the cherries may be slightly damaged, damaged, seriously damaged, misshapen, blemished, seriously blemished, or any combination thereof but not more than 15 percent, by count, of the cherries may be blemished, seriously blemished, and seriously damaged.

(e) (*SStd*) *classification.* Canned sweet cherries which fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points; shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule); and may be "Below standard in quality" for the applicable reasons:

(1) "Partially pitted"; and/or

(2) "Blemished".

§ 52.834 Character.

(a) *General.* The factor of character refers to the fleshiness and to the tenderness and texture in relation to maturity in the canned sweet cherries and to the presence of serious processing cracks in unpitted style.

(1) "Serious processing cracks" means cracks without any discoloration that are so deep as to expose the pit; processing cracks that are not serious are not scoreable.

(b) (*A*) *classification.* Canned sweet cherries that possess a good character may be given a score of 18 to 20 points. "Good character" means that the cherries are thick-fleshed, are tender but not soft or noticeably flabby, and otherwise possess a good texture characteristic of canned sweet cherries that have been properly processed from well-matured cherries; that not more than 10 percent, by count, of the cherries may possess a reasonably good character; and that, in unpitted style, not more than 5 percent, by count, of the cherries may possess serious processing cracks.

(c) (*B*) *classification.* If the canned sweet cherries possess a reasonably good character, a score of 16 or 17 points may be given. Canned sweet cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the cherries are reasonably thick-fleshed, are reasonably tender but not more than slightly soft nor markedly flabby, and otherwise possess a texture characteristic of canned sweet cherries that have been properly processed from reasonably well-matured cherries; that not more than 10 percent by count of the cherries may possess a fairly good character provided, in unpitted cherries, none are thin-fleshed; and that, in unpitted style, not more than 10 percent, by count, of the cherries may possess serious processing cracks.

(d) (*C*) *classification.* If the canned sweet cherries possess a fairly good character, a score of 14 or 15 points may be given. Canned sweet cherries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the cherries may be lacking in thickness of flesh but, in unpitted cherries, the total weight of pits is not more than 12 percent of the weight of drained cherries; may be variable in tenderness and texture, ranging from firm to soft, but characteristic of canned sweet cherries that may have been processed from slightly immature to slightly over-mature cherries; that not more than 10 percent, by count, of the cherries may be markedly flabby; and that, in unpitted style, serious processing cracks may be present.

(e) (*SStd*) *classification.* Canned sweet cherries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule). Canned unpitted sweet cherries in which the total weight of the pits is more than 12 percent of the weight of drained cherries are also "Below standard in quality—thin fleshed".

LOT INSPECTION AND CERTIFICATION

§ 52.835 Ascertaining the grade of a lot.

The grade of a lot canned sweet cherries covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (7 CFR 52.1 through 52.87).

SCORE SHEET

§ 52.836 Score sheet.

Size and kind of container ....
Container mark or identification........
Label........
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces)........
Count per container ....
Brix measurement........
Sirup designation (extra heavy, heavy, etc.)........
Type: ( ) Light—— ( ), dark........
Style: ( ) Unpitted—— ( ), pitted........

Factors		Score points	
Color	30	(A)	27–30
		(B)	24–26
		(C)	[1] 21–23
		(SStd)	[1] 0–20
Uniformity of size	20	(A)	18–20
		(B)	16–17
		(C)	[1] 14–15
		(SStd)	[1] 0–13
Absence of defects	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd)	[1] 0–20
Character	20	(A)	18–20
		(B)	[1] 16–17
		(C)	[1] 14–15
		(SStd)	0–13
Total score	100		

Normal flavor and odor........
Grade........

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Cream Style Corn

SOURCE: 18 FR 7963, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, COLORS, AND GRADES

§ 52.851 Identity.

"Canned cream style corn" means the canned product properly prepared from the clean, sound, succulent kernels of sweet corn as defined in the definition and standard of identity for canned corn (21 CFR 155.130(a)) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.852 Colors of canned cream style corn.

(a) White.

(b) Golden or yellow.

§ 52.853 Grades of canned cream style corn.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned cream style corn that possesses similar varietal characteristics; that is tender; that possesses a good color; that possesses a good consistency; that is practically free from defects; that possesses a very good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the cream style corn may possess a reasonably good color, a reasonably good consistency, a good flavor, and may be reasonably tender, scoring not less than 26 points if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of canned cream style corn that possesses similar varietal characteristics; that is reasonably tender; that possesses a reasonably good color; that possesses a reasonably good consistency; that is reasonably free from defects; that possesses a good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That the cream style corn may possess a fairly good color, scoring not less than 7 points if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned cream style corn that possesses similar varietal characteristics; that is fairly tender; that possesses a fairly good color; that possesses a fairly good consistency; that is fairly free from defects; that possesses a fairly good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned cream style corn that fails to meet the requirements of U.S. Grade C or U.S. Standard and may or may not meet the minimum standards of quality for canned cream style corn issued pursuant to the Federal Food, Drug, and Cosmetic Act.

FILL OF CONTAINER

§ 52.854 Fill of container for canned cream style corn.

The standard of fill of container for canned cream style corn is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purpose of these grades. The standard fill of container for canned cream style corn is a fill of not less than 90 percent of the total capacity of the container. Canned cream style corn that does not meet this requirement is "Below standard in fill."

FACTORS OF QUALITY

§ 52.855 Ascertaining the grade.

(a) The grade of canned cream style corn is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, consistency, absence of defects, tenderness and maturity, and flavor.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factor	Points
Color	10
Consistency	20
Absence of defects	20
Tenderness and maturity	30
Flavor	20
Total score	100

§ 52.856 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.857 Color.

(a) (*A*) *classification.* Canned cream style corn that possesses a good color may be given a score of 9 or 10 points. "Good color" means that the cut kernels possess a practically uniform color typical of tender sweet corn and that the product is bright and is practically free from "off-variety" kernels.

(b) (*B*) *classification.* Canned cream style corn that possesses a reasonably good color may be given a score of 8 points. "Reasonably good color" means that the kernels possess a reasonably uniform color typical of reasonably tender sweet corn, and that the product may lack brightness but not to the extent that the appearance is materially affected, and is reasonably free from "off-variety" kernels.

(c) (*C*) *classification.* Canned cream style corn that possesses a fairly good color may be given a score of 6 or 7 points. Canned cream style corn that scores 7 points in this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, and if scored 6 points in this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule). "Fairly good color" means that the kernels possess a fairly uniform color typical of fairly tender sweet corn and that the product may be dull, but not to the extent that the appearance is seriously affected, and is fairly free from "off-variety" kernels.

(d) (*SStd*) *classification.* Canned cream style corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 5 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.858 Consistency.

(a) *General.* The factor of consistency refers to the viscosity of the product, to the degree of smoothness, and to the separation of free liquor.

(b) (*A*) *classification.* Canned cream style corn that possesses a good consistency may be given a score of 18 to 20 points. "Good consistency" means that the canned cream style corn, after stirring and emptying from the container to a dry flat surface, possesses a heavy cream-like consistency, with not more than a slight appearance of curdling, forms a slightly mounded mass, and that at the end of two minutes after emptying on the dry flat surface there is practically no separation of free liquor.

(c) (*B*) *classification.* If the canned cream style corn has a reasonably good consistency a score of 16 or 17 points may be given. "Reasonably good consistency" means that the canned cream style corn, after stirring and emptying from the container to a dry flat surface, has a reasonably good creamy consistency, with not more than a moderate appearance of curdling, may flow just enough to level off to a nearly uniform depth or may be moderately stiff and moderately mounded, and that at the end of two minutes after emptying on the dry flat surface there may be a slight separation of free liquor.

(d) (*C*) *classification.* Canned cream style corn that has a fairly good consistency may be given a score of 14 or 15 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good consistency" means that the canned cream style corn, after stirring and emptying on a dry flat surface, may be thin but not excessively thin, or thick but not excessively dry, pasty, or crumbly, or moderately but not excessively curdled, and that at the end of two minutes after emptying on the dry flat surface there may be a moderate but not excessive separation of free liquor. The approximate circular area over which the product spreads when emptied on a dry flat surface shall not exceed 12 inches: *Provided,* That when the washed, drained residue of canned cream style corn contains more than 20 percent of alcohol insoluble solids, the average diameter of the area over which the product spreads shall not exceed 10 inches.[1]

(e) (*SStd*) *classification.* Canned cream style corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be graded "Below Standard in Quality" for the following reason: Excessively liquid.

§ 52.859 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from pieces of cob, husk, silk, or other harmless extraneous vegetable matter from pulled kernels, and from discolored kernels or other defects.

(b) (*A*) *classification.* Canned cream style corn that is practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, discolored kernels, or other defects may be present that do not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* If the canned cream style corn is reasonably free from defects, a score of 16 or 17 points may be given. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, discolored kernels, or other defects may be present that do not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* Canned cream style corn that is fairly free from defects may be given a score of 14 or 15 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, discolored kernels, or other defects may be present that do not seriously affect the appearance or eating quality of the product, and that:

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[1] Determined as outlined in the Standard of Quality for Canned Sweet Corn (21 CFR 155.130(b)) promulgated under the Federal Food, Drug, and Cosmetic Act.

(1) For each 20 ounces of net weight there may be present:

(i) Not more than 1 cubic centimeter of pieces of cob;[1] and

(ii) Not more than 1 square inch (1" × 1") of husk;[1] and that

(2) For each 2 ounces of net weight there may be present:

(i) Not more than 1 brown or black discolored kernel or piece of kernel;[1] and that

(3) For each 1 ounce of net weight there may be present:

(i) Not more than 6 inches of silk.[1]

(e) (*SStd*) *classification.* Canned cream style corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be graded "Below Standard in Quality" for the applicable reasons:

(1) Excessive discolored kernels.

(2) Excessive cob.

(3) Excessive husk.

(4) Excessive silk.

§ 52.860 Tenderness and maturity.

(a) (*A*) *classification.* Canned cream style corn that is tender may be given a score of 27 to 30 points. "Tender" means that the kernels are in the milk, early cream, or middle cream stage of maturity, have a tender texture, and that pieces of the interior portions of corn kernels or ground kernels are characteristic of sweet corn in the milk, early cream, or middle cream stage of maturity.

(b) (*B*) *classification.* If the canned cream style corn is reasonably tender a score of 24 to 26 points may be given. Canned cream style corn that scores less than 26 points in this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule). "Reasonably tender" means that the kernels are in the middle cream stage to late cream stage of maturity, have a reasonably tender texture, and that pieces of the interior portions of corn kernels or ground kernels are characteristic of sweet corn in the middle cream to late cream stage of maturity.

(c) (*C*) *classification.* Canned cream style corn that is fairly tender may be given a score of 22 or 23 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender" means that the kernels are in the early dough or dough stage of maturity, may be firm but not hard or tough, and that pieces of the interior portions of corn kernels or ground kernels are characteristic of sweet corn in the early dough or dough stage of maturity. The weight of the alcohol insoluble solids of the washed drained material[1] does not exceed 27 percent of the weight of such material.

(d) (*SStd*) *classification.* Canned cream style corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule), and may also be graded "Below Standard in Quality."

§ 52.861 Flavor.

(a) *General.* The factor of flavor refers to the palatability of the product. The natural flavor of the sweet corn and the effects of added sugar (sucrose) and salt are considered in evaluating this factor.

(b) (*A*) *classification.* Canned cream style corn that possesses a very good flavor may be given a score of 18 to 20 points. "Very good flavor" means that the product including added seasoning ingredients has a very good characteristic flavor and odor typical of tender canned sweet corn.

(c) (*B*) *classification.* If the canned cream style corn possesses a good flavor, a score of 16 or 17 points may be given. "Good flavor" means that the product including added seasoning ingredients has a good characteristic flavor and odor typical of reasonably tender canned sweet corn.

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[1] See footnote 1 to § 52.881.

(d) *(C) classification.* Canned cream style corn that possesses a fairly good flavor may be given a score of 14 or 15 points. Canned cream style corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(e) *(SStd) classification.* Canned cream style corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.862 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.863 Score sheet for canned cream style corn.

Number, size, and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Color (white or golden) ....

Factors		Score points	
Color	10	(A)	9-10
		(B)	8
		(C)	[1] 6-7
		(SStd.)	[2] 0-5
Consistency	20	(A)	18-20
		(B)	16-17
		(C)	[2] 14-15
		(SStd.)	[2] 10-13
Absence of defects	20	(A)	18-20
		(B)	[2] 16-17
		(C)	[2] 14-15
		(SStd.)	[2] 0-13
Tenderness and maturity	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[2] 22-23
		(SStd.)	[2] 0-21
Flavor	20	(A)	18-20
		(B)	16-17
		(C)	14-15
		(SStd.)	[1] 0-13
Total score	100		

Grade ....

[1] Indicates partial limiting rule.
[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Whole Kernel (or Whole Grain) Corn

SOURCE: 18 FR 7965, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, COLOR, AND GRADES

§ 52.881 Identity.

"Canned whole kernel (or whole grain) corn" means the canned product properly prepared from the clean, sound, succulent kernels of sweet corn as defined in the definition and standard of identity for canned corn (21 CFR 155.130(a)) issued pursuant to the Federal Food, Drug, and Cosmetic Act. The product is considered "Vacuum Pack" or "Vacuum Packed" when the liquid in the container[1] is not more than 20 percent of the net weight and the container is closed under conditions creating a high vacuum.

§ 52.882 Color of canned whole kernel (or whole grain) corn.

(a) White.
(b) Golden or Yellow.

§ 52.883 Grades of canned whole kernel (or whole grain) corn.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned whole kernel

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[1] Determined as outlined in the Standard of Quality for Canned Sweet Corn (21 CFR 155.130(a)) promulgated under the Federal Food, Drug, and Cosmetic Act.

(or whole grain) corn that possesses similar varietal characteristics; that is tender; that possesses a good color; that is well cut; that is practically free from defects; that possesses a very good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the canned whole kernel (or whole grain) corn may possess a reasonably good color, a good flavor, and may be reasonably well cut, if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of canned whole kernel (or whole grain) corn that possesses similar varietal characteristics: that is reasonably tender; that possesses a reasonably good color; that is reasonably well cut; that is reasonably free from defects; that possesses a good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That the canned whole kernel (or whole grain) corn may possess a fairly good color, scoring not less than 7 points, and may be fairly well cut, if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned whole kernel (or whole grain) corn that possesses similar varietal characteristics; that is fairly tender; that possesses a fairly good color; that is fairly well cut; that is fairly free from defects; that possesses a fairly good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned whole kernel (or whole grain) corn that fails to meet the requirements of U.S. Grade C or U.S. Standard and may or may not meet the minimum standards of quality for canned whole kernel (or whole grain) corn issued pursuant to the Federal Food, Drug, and Cosmetic Act.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.884 Recommended fill of container.

The recommended fill of container for canned whole kernel (or whole grain) corn is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned whole kernel (or whole grain) corn be filled as full as practicable with the product.

§ 52.885 Recommended minimum drained weight.

The minimum drained weight recommendations of Table No. I of this section are not incorporated in the grades of the finished product, since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of whole kernel (or whole grain) corn is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage and allowing to drain for two minutes The drained weight is the weight of the sieve and the whole kernel (or whole grain) corn less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2½ size can (401" x 411") and smaller sizes and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

TABLE I.—RECOMMENDED MINIMUM DRAINED WEIGHTS, IN OUNCES, OF WHOLE KERNEL (OR WHOLE GRAIN) CORN (EXCEPT VACUUM PACK)

Container size or designation	Grade A, tenderness and maturity minimum drained weight (ounces)	Grades B, C, and Substandard tenderness and maturity minimum drained weight (ounces)
8 ounce, tall	5.25	5.50
No. 1 (picnic)	6.75	7.00
No. 300	9.25	9.50
No. 303	10.50	10.75
No. 2	12.75	13.25

TABLE I.—RECOMMENDED MINIMUM DRAINED WEIGHTS, IN OUNCES, OF WHOLE KERNEL (OR WHOLE GRAIN) CORN (EXCEPT VACUUM PACK)—Continued

Container size or designation	Grade A, tenderness and maturity minimum drained weight (ounces)	Grades B, C, and Substandard tenderness and maturity minimum drained weight (ounces)
No. 10	70.00	72.00

FACTORS OF QUALITY

§ 52.886 Ascertaining the grade.

(a) The grade of canned whole kernel (or whole grain) corn is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, cut, absence of defects, tenderness and maturity, and flavor.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	10
Cut	10
Absence of defects	20
Tenderness and maturity	40
Flavor	20
Total score	100

§ 52.887 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.888 Color.

(a) (*A*) *classification*. Canned whole kernel (or whole grain) corn that possesses a good color may be given a score of 9 or 10 points. "Good color" means that the kernels possess a practically uniform color typical of tender sweet corn and that the product is bright and is practically free from "off-variety" kernels.

(b) (*B*) *classification*. Canned whole kernel (or whole grain) corn that possesses a reasonably good color may be given a score of 8 points. "Reasonably good color" means that the kernels possess a reasonably uniform color typical of reasonably tender sweet corn and that the product may lack brightness but not to the extent that the appearance is materially affected and is reasonably free from "off-variety" kernels.

(c) (*C*) *classification*. Canned whole kernel (or whole grain) corn that possesses a fairly good color may be given a score of 6 or 7 points. Canned whole kernel (or whole grain) corn that scores 7 points in this classification shall not be graded above U.S. Grade B or U.S. Extra Standard and that scores 6 points in this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule). "Fairly good color" means that the kernels possess a fairly uniform color typical of fairly tender sweet corn and that the product may be dull but not to the extent that the appearance is seriously affected and is fairly free from "off-variety" kernels.

(d) (*SStd*) *classification*. Canned whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 5 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.889 Cut.

(a) *General*. The factor of cut refers to the degree of smoothness of the cut surface of the kernels, uniformity and depth of cut, and to the degree of freedom from adhering cob tissue.

(b) (*A*) *classification*. Canned whole kernel (or whole grain) corn which has been well cut may be given a score of 9 or 10 points. "Well cut" means that the appearance of the product is not

best copy available

more than slightly affected by the presence of ragged cut kernels, torn kernels irregular cut kernels, and kernels with attached cob tissue.

(c) (*B*) *classification.* Canned whole kernel (or whole grain) corn in which the kernels are reasonably well cut may be given a score of 8 points. "Reasonably well cut" means that the appearance of the product is not materially affected by the presence of ragged cut kernels, torn kernels, irregular cut kernels, and kernels with attached cob tissue.

(d) (*C*) *classification.* Canned whole kernel (or whole grain) corn in which the kernels are fairly well cut may be given a score of 6 or 7 points. Canned whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Fairly well cut" means that the appearance of the product is not seriously affected by the presence of ragged cut kernels, torn kernels, irregular cut kernels, and kernels with attached cob tissue.

(e) (*SStd*) *classification.* Canned whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 5 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.890 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from pieces of cob, husk, silk, or other harmless extraneous vegetable matter, from pulled kernels, ragged kernels, crushed kernels, loose skins, and from damaged or seriously damaged kernels.

(1) "Damaged kernel" means any kernel affected by insect injury, or damaged by discoloration, pathological injury, or by other means to the extent that the appearance or eating quality is materially affected.

(2) "Seriously damaged kernel" means damaged to such an extent that the appearance or eating quality is seriously affected.

(b) (*A*) *classification.* Canned whole kernel (or whole grain) corn that is practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, ragged kernels, crushed kernels, loose skins, and damaged or seriously damaged kernels may be present that do not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* If the canned whole kernel (or whole grain) corn is reasonably free from defects a score of 16 or 17 points may be given. Canned whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, ragged kernels, crushed kernels, loose skins, and damaged or seriously damaged kernels may be present that do not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* Canned whole kernel (or whole grain) corn that is fairly free from defects may be given a score of 14 or 15 points. Canned whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that:

(1) For each 14 ounces of drained weight there may be present:

(i) Not more than 1 cubic centimeter of pieces of cob;[1]

(ii) Not more than 1 square inch (1"× 1") of husk;[1] and

(2) For each 2 ounces of drained weight there may be present:

(i) Not more than 1 brown or black discolored kernel or discolored piece of kernel;[1] and

(3) For each 1 ounce of drained weight there may be present:

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[1] Determined as outlined in the Standard of Quality for Canned Sweet Corn (21 CFR 155.130(b)) promulgated under the Federal Food Drug, and Cosmetic Act.

(i) Not more than 7 inches of silk;[1] *Provided*, That pieces of cob, silk, or other harmless extraneous vegetable matter, pulled kernels, ragged kernels, crushed kernels, loose skins, and damaged or seriously damaged kernels do not seriously affect the appearance or eating quality of the product.

(e) (*SStd*) *classification.* Canned whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be graded "Below Standard in Quality" for the applicable reasons:

(1) Excessive discolored kernels.

(2) Excessive cob.

(3) Excessive husk.

(4) Excessive silk.

§ 52.891 Tenderness and maturity.

(a) (*A*) *classification.* Canned whole kernel (or whole grain) corn that is tender may be given a score of 36 to 40 points. "Tender" means that the kernels are in the milk or early cream stage of maturity and have a tender texture.

(b) (*B*) *classification.* If the canned whole kernel (or whole grain) corn is reasonably tender a score of 32 to 35 points may be given. Canned whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably tender" means that the kernels are in the cream stage of maturity and have a reasonably tender texture.

(c) (*C*) *classification.* Canned whole kernel (or whole grain) corn that is fairly tender may be given a score of 30 or 31 points. Canned whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender" means that the kernels are in the early dough or dough stage and may be firm but not hard or tough. The weight of the alcohol insoluble solids[1] shall not exceed 27 percent of the drained weight.

(d) (*SStd*) *classification.* Canned whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 29 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be graded "Below Standard in Quality."

§ 52.892 Flavor.

(a) *General.* The factor of flavor refers to the palatability of the product. The natural flavor of the sweet corn and the effects of added sugar (sucrose) and salt are considered in evaluating this factor.

(b) (*A*) *classification.* Canned whole kernel (or whole grain) corn that possesses a very good flavor may be given a score of 18 to 20 points. "Very good flavor" means that the product including added seasoning ingredients has a very good characteristic flavor and odor typical of tender canned sweet corn.

(c) (*B*) *classification.* If the canned whole kernel (or whole grain) corn possesses a good flavor a score of 16 or 17 points may be given. "Good flavor" means that the product including added seasoning ingredients has a good characteristic flavor and odor typical of reasonably tender canned sweet corn.

(d) (*C*) *classification.* Canned whole kernel (or whole grain) corn that possesses a fairly good flavor may be given a score of 14 or 15 points. Canned whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(e) (*SStd*) *classification.* Canned whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.893 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.894 Score sheet for canned whole kernel (or whole grain) corn and canned whole kernel (or whole grain) and vacuum pack corn.

Number, size, and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Color ....

Factors		Score points	
Color	10	(A)	9-10
		(B)	8
		(C)	[1] 6-7
		(SStd.)	[2] 0-5
Cut	10	(A)	9-10
		(B)	8
		(C)	[2] 6-7
		(SStd.)	[2] 0-5
Absence of defects	20	(A)	18-20
		(B)	[2] 16-17
		(C)	[2] 14-15
		(SStd.)	[2] 0-13
Tenderness and maturity	40	(A)	36-40
		(B)	[2] 32-35
		(C)	[2] 30-31
		(SStd.)	[2] 0-29
Flavor	20	(A)	18-20
		(B)	16-17
		(C)	[2] 14-15
		(SStd.)	[2] 0-13
Total score	100		

Grade ....

[1] Indicates partial limiting rule.
[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Whole Kernel (or Whole Grain) Corn

SOURCE: 18 FR 7967, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, COLOR, AND GRADES

§ 52.911 Product description.

Frozen whole kernel (or whole grain) corn means the frozen product prepared from fresh, clean, sound, succulent kernels of sweet corn of either the white or golden (or yellow) varieties by removing husk and silk; by sorting, trimming, and washing; and by blanching before or after removal from the cob. The frozen whole kernel (or whole grain) corn is frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.912 Color of frozen whole kernel (or whole grain) corn.

(a) Golden (or Yellow).
(b) White.

§ 52.913 Grades of frozen whole kernel (or whole grain) corn.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen whole kernel (or whole grain) corn that possesses similar varietal characteristics; that possesses a good flavor and odor; that is tender; that possesses a good color; that is practically free from defects; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the frozen whole kernel (or whole grain) corn may possess a reasonably good color if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen whole kernel (or whole grain) corn that possesses similar varietal characteristics; that possesses a good flavor and odor; that is reasonably tender; that possesses a reasonably good color; that is reasonably free from defects; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That frozen whole kernel (or whole grain) corn may possess a fairly good color, scoring not less than 7 points if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen whole kernel (or whole grain) corn that possesses similar varietal characteristics; that possesses a fairly good flavor and odor; that is fairly tender; that possesses a fiarly good color; that is fairly free from defects; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen whole kernel (or whole grain) corn that fails to meet the requirements of "U.S. Grade C" or "U.S. Standard."

FACTORS OF QUALITY

§ 52.914 Ascertaining the grade.

(a) The grade of frozen whole kernel (or whole grain) corn may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and tenderness and maturity.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	10
Absence of defects	40
Tenderness and maturity	50
Total score	100

(c) The grade of frozen whole kernel (or whole grain) corn is determined immediately after thawing to the extent that the product is substantially free from ice crystals. The product is cooked to determine flavor and odor.

(d) "Good flavor and odor" means that the product, after cooking, has a good characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(e) "Fairly good flavor and odor" means that the product, after cooking, may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.915 Ascertaining the rating of the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "36 to 40 points" means 36, 37, 38, 39, or 40 points).

§ 52.916 Color.

(a) (*A*) *classification*. Frozen whole kernel (or whole grain) corn that possesses a good color may be given a score of 9 or 10 points. "Good color" means that the kernels possess a practically uniform color typical of tender sweet corn and that the product is bright and is practically free from "off-variety" kernels.

(b) (*B*) *classification*. If the frozen whole kernel (or whole grain) corn possesses a reasonably good color a score of 8 points may be given. "Reasonably good color" means that the kernels possess a reasonably uniform color typical of reasonably tender sweet corn and that the product is reasonably bright and reasonably free from "off-variety" kernels.

(c) (*C*) *classification*. Frozen whole kernel (or whole grain) corn that possesses a fairly good color may be given a score of 6 or 7 points. Frozen whole kernel (or whole grain) corn that scores 6 points in this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule). "Fairly good color" means that the kernels possess a fairly uniform color typical of fairly tender sweet corn and that the product may be dull but not to the extent that the appearance is seriously affected, and is fairly free from "off-variety" kernels.

(d) (*SStd*) *classification*. Frozen whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 5 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.917 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from pieces of cob, husk, silk, or other harmless extraneous vegetable matter, from pulled kernels, ragged kernels, crushed kernels, loose skins, and from damaged or seriously damaged kernels.

(1) "Damaged kernel" means any kernel affected by insect injury or damaged by discoloration, pathological injury, or by other means to the extent that the appearance or eating quality is materially affected.

(2) "Seriously damaged kernel" means damaged to such an extent that the appearance or eating quality is seriously affected.

(b) (*A*) *classification.* Frozen whole kernel (or whole grain) corn that is practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, ragged kernels, crushed kernels, loose skins, and damaged or seriously damaged kernels may be present that do not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* If the frozen whole kernel (or whole grain) corn is reasonably free from defects a score of 32 to 35 points may be given. Frozen whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, ragged kernels, crushed kernels, loose skins, and damaged or seriously damaged kernels may be present that do not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* Frozen whole kernel (or whole grain) corn that is fairly free from defects may be given a score of 28 to 31 points. Frozen whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly free from defects" means that pieces of cob, husk, silk, or other harmless extraneous vegetable matter, pulled kernels, ragged kernels, crushed kernels, loose skins, and damaged or seriously damaged kernels may be present that do not seriously affect the appearance or eating quality of the product.

(e) (*SStd*) *classification.* Frozen whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.918 Tenderness and maturity.

(a) (*A*) *classification.* Frozen whole kernel (or whole grain) corn that is tender may be given a score of 45 to 50 points. "Tender" means that the kernels are in the milk or early cream stage of maturity and have a tender texture.

(b) (*B*) *classification.* If the frozen whole kernel (or whole grain) corn is reasonably tender a score of 40 to 44 points may be given. Frozen whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably tender" means that the kernels are in the cream stage of maturity and have a reasonably tender texture.

(c) (*C*) *classification.* Frozen whole kernel (or whole grain) corn that is fairly tender may be given a score of 36 to 39 points. Frozen whole kernel (or whole grain) corn that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender" means that the kernels are in the early dough or dough stage and have a fairly tender texture.

(d) *(SStd) classification.* Frozen whole kernel (or whole grain) corn that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 35 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.919 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.920 Score sheet for frozen whole kernel (or whole grain) corn.

Number, size, and kind of container ....
Containers marks or identification ....
Label ....
Net weight (ounces) ....

Factors		Score points	
Color	10	(A)	9–10
		(B)	8
		(C)	[1] 6–7
		(SStd.)	[2] 0–5
Absence of defects	40	(A)	36–40
		(B)	[2] 32–35
		(C)	[2] 28–31
		(SStd.)	[2] 0–27
Tenderness and maturity.	50	(A)	45–50
		(B)	[2] 40–44
		(C)	[2] 36–39
		(SStd.)	[2] 0–35
Total score	100		

Grade ....
Flavor and odor ....

[1] Indicates partial limiting rule.
[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Corn-on-the-Cob

SOURCE: 35 FR 10427, June 6, 1970, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, COLOR, GRADES

§ 52.931 Product description.

Frozen corn-on-the-cob is the product which is prepared from sound, properly matured, fresh, sweet corn ears by removing husk and silk; by sorting, trimming, and washing to assure a clean and wholesome product. The ears are blanched, then frozen and stored at temperatures necessary for the preservation of the product.

§ 52.932 Styles.

(a) *Trimmed.* Ears trimmed at both ends to remove tip and stalk ends and/or cut to specific lengths.

(b) *Natural.* Ears trimmed at the stalk end only to remove all or most of the stalk.

§ 52.933 Lengths.

(a) *Regular.* Ears which are predominantly over 3½ inches in length.

(b) *Short.* Ears which are predominantly 3½ inches or less in length.

§ 52.934 Colors of frozen corn-on-the-cob.

(a) Golden (or yellow).

(b) White.

§ 52.935 Grades.

(a) "U.S. Grade A" (or U.S. Fancy) frozen corn-on-the-cob is composed of ears with similar varietal characteristics and that have a good flavor and odor. The ears have a good color; are at least reasonably uniform in size; are at least reasonably well developed; are practically free from defects; and are tender. The product scores not less than 90 points when rated in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or U.S. Extra Standard) frozen corn-on-the-cob is composed of ears with similar varietal characteristics and that have at least a reasonably good flavor and odor. The ears have at least a reasonably good color; may lack uniformity of size and development; are at least reasonably free from defects; and are at least reasonably tender. The product scores not less than 80 points when rated in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen corn-on-the-cob that fails to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.936 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of frozen corn-on-the-cob is ascertained by considering: The flavor and odor which are not scored; the ratings for the factors of color, uniformity of size, development, defects, and tenderness and maturity which are scored; the total score; and the limiting rules which may be applicable.

(b) *Sample unit size.* For purposes of rating the quality factors, a sample unit shall consist of four (4) ears; or, if the ears are "short" ears (trimmed to predominantly 3½ inches or less in length) the sample unit shall be eight (8) such "short" ears.

(c) *Definitions of flavor and odor.* (1) "Good flavor and odor" means that the product has a good, characteristic, normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(2) "Reasonably good flavor and odor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(d) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size	10
Development	10
Defects	30
Tenderness and maturity	30
Total score	100

§ 52.937 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "27 to 30 points" means 27, 28, 29, or 30 points.)

§ 52.938 Color.

(a) *General.* The factor of color is evaluated immediately after the product has been water-thawed to the extent that the outer surfaces are substantially free from ice crystals.

(b) *Definition of "off-variety" kernels.* "Off-variety" kernels are those which are not blemished but which vary markedly from the predominant color and are not characteristic of the variety.

(c) (*A*) *Classification.* Frozen corn-on-the-cob that has a good color may be given a score of 18 to 20 points. "Good color" means that the corn has a typical, bright color and complies with the requirements for U.S. Grade A in table I.

(d) (*B*) *Classification.* Frozen corn-on-the-cob that has a reasonably good color may be given a score of 16 or 17 points. Frozen corn-on-the-cob that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score (limiting rule). "Reasonably good color" means a color that may be slightly dull but is not of abnormal color. Such color also complies with the requirements for U.S. Grade B in table I.

(e) (*SStd*) *Classification.* Frozen corn-on-the-cob that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

TABLE I—REQUIREMENTS FOR UNIFORMITY OF COLOR AND OFF-VARIETY KERNELS

	Uniformity of color		Off-variety kernels	
	Each ear in the sample unit	All ears in the sample unit	Each ear in the sample unit (maximum number)	All ears in the sample unit (maximum number)
U.S. Grade A	Practically uniform	Reasonably uniform	3 kernels	6 kernels.
U.S. Grade B	Reasonably uniform	Fairly uniform	15 kernels	30 kernels.

§52.939 Uniformity of size.

(a) *General.* The rating for uniformity of size is based on the variations in length and diameter of the ears. The diameter is the largest diameter measured at right angles to the longitudinal axis.

(b) (*A*) *Classification.* Frozen corn-on-the-cob that is practically uniform in size may be given a score of 9 or 10 points. "Practically uniform in size" means that the variations in the diameter and/or length of the ears do not exceed the variations allowed for U.S. Grade A, for the applicable style, in table II.

(c) (*B*) *Classification.* Frozen corn-on-the-cob that is only reasonably uniform in size may be given a score of 8 points. "Reasonably uniform in size" means that the variations in the diameter and/or length of the ears do not exceed the variations allowed for U.S. Grade B, for the applicable style, in table II.

(d) (*SStd*) *Classification.* Frozen corn-on-the-cob that exceeds the variations allowed for U.S. Grade B, for the applicable style, in table II may be given a score of 0 to 7 points and shall not be graded above Grade B, regardless of the total score (partial limiting rule).

TABLE II—VARIATION LIMITS FOR DIAMETER AND LENGTH

[Maximum variation in the sample unit]

	Trimmed style				Natural style (untrimmed)	
	Regular length ears		Short length ears		Diameter	Length
	Diameter	Length	Diameter	Length		
U.S. Grade A	½ inch	¾ inch	½ inch	½ inch	½ inch	1½ inches.
U.S. Grade B	¾ inch	1 inch	¾ inch	½ inch	¾ inch	2 inches.

§52.940 Development.

(a) *General.* (1) Development refers to the extent that the ears are filled with corn kernels and the pattern arrangement, as applicable, of such kernels on the cob.

(2) Classification of "development defects", if applicable, are made on each ear, regardless of length.

(3) Evaluation of this factor as to grade is made on the basis of a sample unit.

(b) *Conditions of evaluation.* (1) The classification of "development defects" is done after the product has been thawed to the extent that the outer surfaces are substantially free from ice crystals.

(2) For natural style, "development defects" over the outermost one (1) inch of the tip end of the ear are not scored.

(c) (*A*) *Classification.* Frozen corn-on-the-cob that is well developed may be given a score of 9 or 10 points. "Well developed" means that the ears in the sample unit are well filled with kernels and the appearance of none of the ears in the sample unit is materially affected by missing, or underdeveloped kernels. In addition, any "development defects" present (as defined and classified in this section) do not exceed the allowances in table III.

(d) (*B*) *Classification.* Frozen corn-on-the-cob that is reasonably well developed may be given a score of 8 points. "Reasonably well developed" means that the ears in the sample unit are reasonably well filled with kernels and the appearance of none of the ears in the sample unit is seriously affected by missing, or underdeveloped kernels. In addition, any "development defects" present (as defined and classified in this section) do not exceed the allowances in table III.

TABLE III—DEVELOPMENT DEFECTS FOR EACH GRADE

[Maximum in the sample unit]

Grade classification	Total minor only (applicable only when there are no major)	Total of minor and major	Limit for major
U.S. Grade A	3	2	1
U.S. Grade B	6	4	2

(e) (*SStd*) *Classification.* Frozen corn-on-the-cob that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 7 points and shall not be graded above Grade B, regardless of the total score for the product (partial limiting rule).

(f) *Definitions and classification of "development defects".*

Type of development defect (applicable to each ear, regardless of length)	Classification	
	Minor	Major
Twisted ear:		
An ear twisted—more than the width of 4 rows of kernels or more than ¼ of the circumference—from one end to the other	X	
Nonparallel kernels:		
(Not applicable to varieties which characteristically have staggered rows:)		
An ear having an area comprised of three (3) or more adjacent nonparallel rows extending more than two (2) inches, lengthwise, of the ear	X	
Separation of rows exceeding ½ the length of the ear:		
One space showing cob more than ¼, but not more than ½, the width of an average size kernel	X	
Two or more such spaces showing cob more than ¼, but not more than ½, the width of an average size kernel		X
A space or spaces showing cob more than ½ the width of an average size kernel		X

§ 52.941 Defects.

(a) *General.* (1) This factor refers to the degree of freedom from such defects as crushed and broken kernels, blemished kernels, poorly trimmed ears, attached stalk, husk, and dark or readily noticeable silk.

(2) Crushed and broken kernels, blemished kernels, poorly trimmed ears, and attached stalk are scored on the basis of individual ears, regardless of length.

(3) Husk and silk are aggregated and are scored on the basis of a sample unit.

(b) *Conditions of evaluation.* (1) The classification of defects is done after the product has been water-thawed.

(2) For natural style, defects over the outermost one (1) inch of tip end of ear are not scored except for those kernels which are classed as blemished.

(c) (*A*) *Classification.* Frozen corn-on-the-cob that is practically free from defects may be given a total score of 27 to 30 points. "Practically free from defects" means that:

(1) Any combination of defects present (whether or not specifically defined) may slightly, but not materially, detract from the appearance or edibility of the product; and

(2) The defects present (as defined and classified in this section) do not exceed the allowances in Table IV.

(d) (*B*) *Classification.* Frozen corn-on-the-cob that is reasonably free from defects may be given a score of 24 to 26 points. Frozen corn-on-the-cob that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (limiting rule). "Reasonably free from defects" means that:

(1) Any combination of defects present (whether or not specifically de-

fined) does not seriously detract from the appearance or edibility of the product; and

(2) The defects present (as defined and classified in this section) do not exceed the allowances in Table IV.

TABLE IV—DEFECTS FOR EACH GRADE

Grade classification	Total of minor only (applicable only when there are no major or severe)	Total of minor, major, and severe (maximum per sample unit)	Limit for major and severe	Limit for severe
U.S. Grade A	6	4	1	0
U.S. Grade B	12	9	3	1

(e) (*SStd*) *Classification.* Frozen corn-on-the-cob that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

(f) *Definitions and classifications of defects.*

Types of defects and definitions	Classification		
	Minor	Major	Severe
Applicable to an individual ear, regardless of length			
Crushed or broken kernels (other than those at end of ears caused by trimming or cutting):			
Short length ears:			
7 to 15 kernels	X		
16 to 30 kernels		X	
More than 30 kernels			X
or			
16 or more kernels in one area materially affecting the appearance of the ear			X
Regular length ears:			
10 to 25 kernels	X		
26 to 50 kernels		X	
More than 50 kernels			X
or			
26 or more kernels in one area materially affecting the appearance of the ear			X
Blemished kernels (includes, but is not limited to, kernels affected by discoloration, blemishes, pathological injury, or other damage):			
Short length ears:			
1 or 2 kernels	X		
3 or 4 kernels		X	
More than 4 kernels			X
Regular length ears:			
2 or 3 kernels	X		
4, 5, or 6 kernels		X	
More than 6 kernels			X
Poorly trimmed ears:			
More than 30°, but not more than 45°, from a right-angle cut	X		
More than 45° from a right-angle cut		X	
Stalks:			
More than ¼ inch, but not more than ½ inch, of attached stalk	X		
More than ½ inch of attached stalk		X	
The following are aggregated and apply to the entire sample unit			
Attached or loose husk:			
More than one (1) square inch but not more than two (2) square inches	X		
More than two (2) square inches but not more than three (3) square inches		X	
More than three (3) square inches			X
Dark or readily noticeable silk (strands one (1) inch long or longer):			
10 to 20 inches	X		
21 to 30 inches		X	
Over 30 inches			X

§ 52.942 Tenderness and maturity.

(a) *General.* The tenderness and maturity of the frozen corn-on-the-cob is determined by:

(1) Checking for presence of a blister-stage of kernel development on water-thawed ears;

(2) Checking the stages of kernel development in accordance with the method in § 52.943; and

(3) Checking the tenderness of the pericarp and affirming the maturity of the kernels after cooking in accordance with the method in § 52.944.

(b) *Definitions of stages of kernel development*—(1) *"Blister stage".* The kernel contents are thin and watery or slightly cloudy or translucent and the pericarp is generally very pale in color. An ear is considered to be in the blister stage if more than one-fifth of the kernels are in the blister stage.

(2) *"Milk stage".* The kernel contents are opaque and viscous. Light pressure is required to remove contents.

(3) *"Early cream stage".* The kernel contents are slightly creamy and viscous. Reasonably firm pressure is required to remove contents which show only slight separation of clear liquid.

(4) *"Cream stage".* The kernel contents are creamy and thick. Firm pressure is required to remove contents which show no free liquid.

(5) *"Dough or overmature stage".* The kernel contents are semi-solid or hard and require considerable pressure to remove contents which appears starchy or doughlike.

(c) (*A*) *classification.* Frozen corn-on-the-cob that is tender, but none of the ears in the blister stage, may be given a score of 27 to 30 points. "Tender" means that the kernels are in the milk or early cream stage of maturity and the pericarp is reasonably tender.

(d) (*B*) *classification.* If the frozen corn-on-the-cob is reasonably tender, and none of the ears are in the blister stage, a score of 24 to 26 points may be given. Frozen corn-on-the-cob that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (limiting rule). "Reasonably tender" means that the kernels are in the cream stage or better stage of maturity and the pericarp is fairly tender.

(e) (*SStd*) *classification.* Frozen corn-on-the-cob that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

EXPLANATIONS AND METHODS OF ANALYSIS

§ 52.943 Preparation for and evaluation of stages of kernel development.

(a) The sample unit is water-thawed only to the extent that the ears are substantially free from ice crystals.

(b) At least three (3) complete adjacent rows of kernels from each ear (or an equivalent number of kernels if the kernels are not in rows) are removed by cutting the kernels off, near but above their attachment to the cob.

(c) The cut kernels from all the ears in a sample unit are well mixed and an adequate representative sub-sample is removed.

(d) Sufficient kernels from the sub-sample are squeezed to properly evaluate the degree of maturity in accordance with the definitions in § 52.942.

§ 52.944 Cooking procedure and evaluation of cooked units.

(a) An adequate representative number of ears in the sample unit are evaluated after cooking to ascertain:

(1) The degree of maturity of kernel contents;

(2) Tenderness of the pericarp; and

(3) The flavor and odor.

(b) This cooking procedure is not intended as a recipe, but for the purposes of this subpart, frozen corn-on-the-cob is cooked (and the evaluation thereof) is as follows:

(1) Place the sample units into rapidly boiling water with sufficient water to completely cover the ears;

(2) Return the water to a rapid boil;

(3) Maintain a rolling boil for exactly five (5) minutes;

(4) Remove the ears immediately, and allow to cool sufficiently to evaluate factors of maturity, tenderness of pericarp, and flavor and odor by eating the corn directly from the cob.

LOT COMPLIANCE

§ 52.945 Ascertaining the grade of a lot.

The grade of a lot of frozen corn-on-the-cob covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1–52.87), except that these provisions apply wherever applicable:

(a) *Container size.* In considering the size of a container for purposes of selecting samples from a lot, an ear shall be considered to weigh 8 ounces except that ears which are trimmed to approximately 3½ inches or less in length shall be considered to weigh 4 ounces each.

(b) *Dozen.* In calculating the number of dozens of ears, ears which are trimmed to approximately 3½ inches or less in length shall be considered as 24 of such ears being the equivalent of one dozen ears.

SCORE SHEET

§ 52.946 Score sheet for frozen corn-on-the-cob.

Size and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....
Style (trimmed or natural) ....
Length of ears (inches) ....
Color (yellow or white) ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	[1] 16–17
		(SStd)	[1] 0–15
Uniformity of size.	10	(A)	9–10
		(B)	8
		(SStd)	[2] 0–7
Development	10	(A)	9–10
		(B)	8
		(SStd)	[2] 0–7
Defects	30	(A)	27–30
		(B)	[1] 24–26
		(SStd)	[1] 0–23
Tenderness and maturity.	30	(A)	27–30
		(B)	[1] 24–26
		(SStd)	[1] 0–23
Total score	100		

Flavor and odor ....
(A) Good; (B) Reasonably good; (SStd) Objectionable ....

Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Cranberry Sauce

SOURCE: 18 FR 7970, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.951 Product description.

Canned cranberry sauce is the jellied or semi-jellied product prepared from clean, sound, matured or fairly well-matured cranberries; a sweetening ingredient or sweetening ingredients, and water. Pectin may be added but only in a quantity which reasonably compensates for deficiency, if any, of the natural pectin content of the cranberries. The mixture is concentrated and sufficiently processed by heat to assure preservation of the product in hermetically sealed containers. The soluble solids of the finished product is not less than 35 percent and not more than 45 percent.

§ 52.952 Styles of canned cranberry sauce.

(a) *Style I.* Jellied or strained (typical of a jellied product prepared from strained cranberries).

(b) *Style II.* Whole (typical of a semi-jellied product prepared from whole or partially whole cranberries).

§ 52.953 Grades of canned cranberry sauce.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned cranberry sauce that possesses a good color; that possesses a good consistency and good texture; that is practically free from defects; that possesses a good flavor and odor; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned cranberry sauce that possesses a fairly good color; that possesses a fairly good consistency and a fairly good texture; that is fairly free from defects; that possesses a fairly good flavor and odor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Substandard" is the quality of canned cranberry sauce that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.954 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled as full as practicable with cranberry sauce and that the product occupy not less than 90 percent of the volume of the container.

FACTORS OF QUALITY

§ 52.955 Ascertaining the grade.

The grade of canned cranberry sauce may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, consistency and texture, absence of defects, and flavor and odor. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Consistency and texture	40
Absence of defects	20
Flavor and odor	20
Total score	100

§ 52.956 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.957 Color.

(a) *(A) classification.* Canned cranberry sauce that possesses a good color may be given a score of 17 to 20 points. "Good color" means the bright, dark red color typical of canned cranberries which color is free from any dullness.

(b) *(C) classification.* If the canned cranberry sauce possesses a fairly good color, a score of 14 to 16 points may be given. Canned cranberry sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly good color" means the red color typical of canned cranberries, which color may be slightly dull or may indicate slight evidence of oxidation but is not off color.

(c) *(SStd) classification.* Canned cranberry sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.958 Consistency and texture.

(a) *(A) classification.* Canned cranberry sauce that possesses a good consistency and good texture may be given a score of 34 to 40 points. "Good consistency and good texture" has the following meanings with respect to the following styles of canned cranberry sauce:

(1) *Jellied or strained.* The gel is tender to slightly firm and there may be evidence of a reasonable separation of free liquid.

(2) *Whole.* The skin particles and the semi-jellied portions are reasonably tender and the fruit, seed, and skin particles are dispersed reasonably uniform throughout the product.

(b) *(C) classification.* If the canned cranberry sauce possesses a fairly good consistency and a fairly good texture, a score of 28 to 33 points may be given. Canned cranberry sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good consistency and fairly good texture" has the following meanings with respect to the following styles of canned cranberry sauce:

(1) *Jellied or strained.* The gel may lack firmness or may be stiff but is not tough or rubbery and there may be evidence of separation of free liquid which is not excessive.

(2) *Whole.* The skin particles and the semi-jellied portions are fairly tender and the fruit, seed, and skin particles are dispersed fairly uniform throughout the product and there may be evidence of separation of free liquid which is not excessive.

(c) (*SStd*) *classification.* Canned cranberry sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.959 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from foreign material and objectionable material and from harmless extraneous particles in Style I, Jellied or strained; and from defective cranberries and foreign berries and particles thereof, fine stems, foreign material and objectionable material, and other defects in Style II, Whole.

(b) (*A*) *classification.* Canned cranberry sauce that is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" has the following meanings with respect to the following styles of cranberry sauce:

(1) *Jellied or strained.* The product is free from foreign material and objectionable material, is free from any harmless extraneous particles that exceed the area of a circle 3/16 inch in diameter; and is practically free from harmless extraneous particles that are the equivalent in area of a circle 3/16 inch or less in diameter.

(2) *Whole.* There may be present for each 12 ounces of net weight not more than 3 defective cranberries or foreign berries and not more than 4 fine stems ¾ inch or more in length; the product is free from foreign material and objectionable material and is practically free from other defects which affect materially the appearance or edibility of the product.

(c) (*C*) *classification.* If the canned cranberry sauce is fairly free from defects, a score of 14 to 16 points may be given. Canned cranberry sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly free from defects" has the following meanings with respect to the following styles of cranberry sauce:

(1) *Jellied or strained.* The product is free from foreign material and objectionable material; is practically free from harmless extraneous particles that exceed the area of a circle 3/16 inch in diameter; and is fairly free from harmless extraneous particles that are the equivalent in area of a circle 3/16 inch or less in diameter.

(2) *Whole.* There may be present for each 12 ounces of net weight not more than 6 fine stems ¾ inch or more in length; the product is free from foreign material and objectionable material and is fairly free from other defects which affect materially the appearance or edibility of the product.

(d) (*SStd*) *classification.* Canned cranberry sauce that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.960 Flavor and odor.

(a) (*A*) *classification.* Canned cranberry sauce that possesses a good flavor and odor may be given a score of 17 to 20 points. "Good flavor and odor" means that the product possesses a good characteristic, slightly tart flavor typical of cooked cranberries and that the produce is free from any trace of a carmelized flavor, abnormal flavor, or abnormal odor.

(b) (*C*) *classification.* If the canned cranberry sauce possesses a fairly good flavor and odor, a score of 14 to 16 points may be given. Canned cranberry sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor and odor" means that the product possesses a normal flavor typical of cooked cranberries and that the product is free from objectionable flavors and objectionable odors of any kind.

(c) (*SStd*) *classification.* Canned cranberry sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATION

§ 52.961 Explanation of terms.

(a) "Soluble solids" content is determined refractometrically without correction for water-insoluble solids.

LOT INSPECTION AND CERTIFICATION

§ 52.962 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.963 Score sheet for canned cranberry sauce.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Style ....
Soluble solids (per cent by refractometer) ....

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1] 14-16
		(D)	[1] 0-13
Consistency and texture.	40	(A)	34-40
		(C)	[1] 28-33
		(D)	[1] 0-27
Absence of defects.	20	(A)	17-20
		(C)	[1] 14-16
		(D)	[1] 0-13
Flavor and odor	20	(A)	17-20
		(C)	[1] 14-16
		(D)	[1] 0-13
Total score	100		

Grade ....

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[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Dates

SOURCE: 20 FR 5755, Aug. 10, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.1001 Product description.

Dates are the properly cured fresh fruit of the date tree (Phoenix dactylifera) which may or may not be softened by hydration. For the purposes of the standards in this subpart, dates, when referred to as "dry dates for processing," means that the dates are dry and have not been softened by hydration.

§ 52.1002 Styles of dates.

(a) "Whole" or "whole dates" means whole unpitted dates from which the pits have not been removed and which may be slit longitudinally.

(b) "Pitted" or "pitted dates" means whole dates from which the pits have been removed.

(c) "Pieces" or "date pieces" means dates that have been cut or sliced into small pieces and that can be handled as individual units.

(d) "Macerated" or "macerated dates" means dates that have been ground, chopped, mashed, or broken or that have been cut or sliced into small pieces and that cannot be handled as individual units.

§ 52.1003 Grades of dates.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of whole or pitted dates that are of one variety, that possess a good color, that are practically uniform in size, that are practically free from defects, that possess a good character, and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of whole or pitted dates other than whole dry dates for processing that are of one variety, that possess a reasonably good color, that are reasonably uniform in size, that are reasonably free from defects, that possess a reasonably good character, and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade B (Dry)" or "U.S. Choice (Dry)" is the quality of whole dry dates for processing that are of one variety, that possess a reasonably good color, that are reasonably uniform in size, that are reasonably free from defects, that possess a reasonably good character, and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U.S. Grade C" or "U.S. Standard" is the quality of whole or pitted dates other than whole dry dates for processing that are of one variety or of date pieces or macerated dates that possess a fairly good color, that are fairly uniform in size except for date pieces or macerated dates, that are fairly free from defects, that possess a fairly good character, and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(e) "U.S. Grade C (Dry)" or "U.S. Standard (Dry)" is the quality of whole dry dates for processing that are of one variety, that possess a fairly good color, that are fairly uniform in size, that are fairly free from defects, that possess a fairly good character, and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(f) "Substandard" is the quality of dates that fail to meet the requirements of U.S. Grade C or U.S. Standard or U.S. Grade C (Dry) or U.S. Standard (Dry), whichever is applicable.

FACTORS OF QUALITY

§ 52.1004 Ascertaining the grade.

In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(a) *Factor not related by score points.* (1) Varietal requirement.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
(1) Color	20
(2) Uniformity of size	10
(3) Absence of defects	30
(4) Character	40
Total score	100

§ 52.1005 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1006 Color.

(a) (*A*) *classification.* Whole or pitted dates that possess a good color may be given a score of 18 to 20 points. "Good color" means that the color of the dates is practically uniform; and, with respect to dates that are predominantly light amber in color, there may be not more than 5 percent by count of dates that are dark amber in color; and, with respect to dates that are predominantly dark amber in color, there may be not more than 5 percent by count of dates that are light amber in color.

(b) (*B*) *classification.* If the whole or pitted dates or whole dry dates for processing possess a reasonably good color, a score of 16 or 17 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice or U.S. Grade

B (Dry) or U.S. Choice (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the color of the whole or pitted dates or whole dry dates for processing is reasonably uniform for the type; and, with respect to dates that are predominantly light amber in color, there may be not more than 10 percent by count of dates that are dark amber in color; and, with respect to dates that are predominantly dark amber in color, there may be not more than 10 percent by count of dates that are light amber in color.

(c) (*C*) *classification.* If the whole or pitted dates, whole dry dates for processing, date pieces, or macerated dates possess a fairly good color, a score of 14 or 15 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard or U.S. Grade C (Dry) or U.S. Standard (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Fairly good color" has the following meanings with respect to the following styles:

(1) *Whole; pitted.* The color of the whole or pitted dates or whole dry dates for processing is fairly uniform for the type; and, with respect to dates that are predominantly light amber in color, there may be not more than 20 percent by count of dates that are dark amber in color; and, with respect to dates that are predominantly dark amber in color, there may be not more than 20 percent by count of dates that are light amber in color.

(2) *Pieces; macerated.* The color may be variable throughout the units or mass, may be slightly dull but not off-color, and is typical of properly prepared dates of these styles.

(d) (*SStd*) *classification.* Dates that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1007 Uniformity of size.

(a) *General.* The factor of uniformity of size applies only to whole and pitted styles. The factor of uniformity of size in the styles of date pieces and macerated dates is not based on any detailed requirements and is not scored; the other three factors (color, absence of defects, and character is applicable) are scored and the total is multiplied by 100 and divided by 90, dropping any fractions to determine the total score.

(b) (*A*) *classification.* Whole or pitted dates that are practically uniform in size may be given a score of 9 or 10 points. "Practically uniform in size" means that not more than a total of 10 percent, by weight, of the whole or pitted dates may be conspicuously larger or smaller than the approximate average size of the dates in the container.

(c) (*B*) *classification.* If the whole or pitted dates or whole dry dates for processing are reasonably uniform in size, a score of 8 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice or U.S. Grade B (Dry) or U.S. Choice (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Reasonably uniform in size" means that not more than a total of 15 percent, by weight, of the whole or pitted dates may be conspicuously larger or smaller than the approximate average size of the dates in the container.

(d) (*C*) *classification.* If the whole or pitted dates or whole dry dates for processing are fairly uniform in size, a score of 7 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard or U.S. Grade C (Dry) or U.S. Standard (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size" means that not more than a total of 20 percent, by weight, of the whole or pitted dates may be conspicuously larger or smaller than the approximate average size of the dates in the container.

(e) (*SStd*) *classification.* Whole or pitted dates or whole dry dates for processing that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1008 Absence of defects.

(a) *Definitions of defects.* Unless otherwise stated specifically, the following definitions of defects or defective units apply only to whole or pitted dates or whole dry dates for processing, as applicable for the type:

(1) "Damaged by discoloration" is the presence of a dark area in the flesh of the date, which dark area is visible through the skin and is more than one-fourth (¼) inch in width and extends more than the equivalent of half the length of the date, such darkening being of natural origin and not caused by mold or other organism.

(2) "Damaged by broken skin" is any rupture of the skin in a manner to expose the flesh of the date, the shortest dimension of such exposed area being not less than three-sixteenths (3/16) inch.

(3) "Damaged by checking" is the presence of fine lines, resulting from water injury, affecting the surface of the skin over an area not less than one-fourth of the total surface of the date.

(4) "Seriously damaged by checking" is the presence of heavy lines, resulting from water injury, seriously affecting the surface of the skin over an area not less than one-fourth of the total surface of the date.

(5) "Damaged by deformity" is any abnormal shape sufficient to produce an appearance discernibly at variance with the normal shape that is typical of the variety.

(6) "Damaged by puffiness" is the condition of a date of which the skin is soft and pliable and from which the skin is separated from the flesh in a balloon-like fashion, over an area not less than one-half of the total surface of the date. Soft skins which have returned and adhere to the flesh of the date are not considered "damaged by puffiness."

(7) "Seriously damaged by puffiness" is the condition of a date of which the skin is dry, hard, and brittle and from which the skin is separated from the flesh over an area not less than one-half of the total surface of the date.

(8) "Damaged by scars" are any blemishes that affect the exterior of the date and which are not less than three-sixteenths (3/16) inch in the shortest dimension.

(9) "Damaged by sunburn" is an area, usually light in color, scarred by the heat of the sun, such area being not less than three-sixteenths (3/16) inch in the shortest dimension.

(10) "Damaged by insect injury" is any blemish, resulting from the activity of insects or mites, distributed over an area of not less than one-fourth of the total surface of the date or any similar blemish that materially affects the appearance or edibility of the unit, regardless of the area affected.

(11) "Damaged by improper hydrating" means that the date has been injured by excessive heat or that the hydrating process is incomplete.

(12) "Damaged by mashing" means any physical injury to the flesh and skin of the date leaving the date partially mangled but otherwise whole.

(13) "Damaged by mechanical injury" means excessive trimming or similar injury that damages the appearance or that damages or affects the eating quality of the whole date.

(14) "Damaged by lack of pollination" means, with respect to whole dates, that pollination of the date was not accomplished, such condition being manifested by the absence of a pit in the whole dates or by thin, immature appearance of the date.

(15) "Damaged by blacknose" is severe checking in which the flesh becomes dark, crusty, and dry and which severe checking affects an area greater than one-eighth of the total surface of the date.

(16) "Damaged by side spot" means a very dark area, which generally is circular in appearance, extending into the flesh of the date, and, when decayed tissue or mold is not present, affecting in the aggregate an area not less than the area of a circle three-sixteenths (3/16) inch in diameter.

(17) "Damaged by black scald" means the collapse, death, and blackening of the flesh along the side of the date, usually accompanied by a bitter taste in the affected area.

(18) "Damage by improper ripening" means pronounced evidence of "green

shrivel" of the date or that the date possesses a puffy flesh or a decidedly rubbery texture resulting from failure of the tissue of the date to reach a desirable state of maturity due to climatic or cultural injury, or both.

(19) "Damaged by other defects" means any injury or defect or group of defects not defined in this section (such as, but not limited to, heavy sugaring, and excessive scars not described in the definition "damaged by scars,") which materially affect the appearance, edibility, or keeping quality of the dates.

(20) "Affected by scouring" is evidenced by the breakdown of the sugars into alcohol and acetic acid by yeasts and bacteria.

(21) "Affected by mold" is the presence of visible mold.

(22) "Affected by dirt" is the presence of any quantity of such substance.

(23) "Affected by insect infestation" is the presence of dead insects, insect parts, or excreta. (No live insects are permitted.)

(24) "Affected by foreign material" is the presence of any quantity of such substance.

(25) "Affected by decay" is a state of decomposition.

(b) (*A*) *classification.* Whole or pitted dates that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that in pitted dates there may be present not more than one whole pit or two pit fragments for each 25 ounces of pitted dates; and that the whole or pitted dates do not exceed the total allowances and limitations shown in Chart I of this subpart.

(c) (*B*) *classification.* If the whole or pitted dates or whole dry dates for processing are reasonably free from defects, a score of 24 to 26 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice or U.S. Grade B (Dry) or U.S. Choice (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that in pitted dates there may be present not more than one whole pit or two pit fragments for each 25 ounces of pitted dates; and that the whole or pitted dates or whole dry dates for processing do not exceed the total allowances and limitations shown in Chart II of this subpart.

(d) (*C*) *classification.* If the whole or pitted dates, whole dry dates for processing, date pieces, or macerated dates are fairly free from defects, a score of 21 to 23 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard or U.S. Grade C (Dry) or U.S. Standard (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meanings with respect to the following styles:

(1) *Whole.* The defects or defective units in whole dates or whole dry dates for processing do not exceed the total allowances and limitations shown in Chart III of this subpart.

(2) *Pitted.* Not more than one whole pit or two pit fragments for each 25 ounces of pitted dates may be present; and the defects or defective units in pitted dates do not exceed the total allowances and limitations shown in Chart III of this subpart.

(3) *Pieces; macerated.* Not more than one whole pit or two pit fragments for each 25 ounces of pitted dates may be present; and the units or mass consists of clean and sound date material, fairly free from defects that seriously affect the appearance, edibility, or keeping quality of the product.

(e) (*SStd*) *classification.* Dates that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

CHART NO. I—ALLOWANCES AND LIMITATIONS FOR DEFECTS IN WHOLE AND PITTED DATES (OTHER THAN WHOLE DRY DATES FOR PROCESSING); U.S. GRADE A OR U.S. FANCY

TOTAL ALLOWANCE

Not more than a total of 10 percent, by weight of the dates, may be the following:

Damaged by:
  Discoloration.
  Broken skin.
  Checking.

- Deformity.
- Puffiness.
- Scars.
- Sunburn.
- Insect injury.
- Improper hydrating.
- Mashing.
- Mechanical injury.
- Lack of pollination.
- Blacknose.
- Side spot.
- Black scald.
- Improper ripening.
- Other defects.

Seriously damaged by checking.
Seriously damaged by puffiness.
Affected by:
- Souring.
- Mold.
- Dirt.
- Insect infestation.
- Foreign material.
- Decay.

LIMITATIONS

Not more than ⅗ of the total allowance or 6 percent, by weight of the dates, may be the following:

Damaged by:
- Side spot.
- Black scald.
- Improper ripening.
- Other defects.

Affected by:
- Souring.
- Mold.
- Dirt.
- Insect infestation.
- Foreign material.
- Decay.

Not more than ⅖ of the total allowance, or 4 percent, by weight of the dates, may be the following:

Damaged by:
- Improper ripening.
- Other defects.

Affected by:
- Souring.
- Mold.
- Dirt.
- Insect infestation.
- Foreign material.
- Decay.

Not more than ⅒ of the total allowance, or 1 percent, by weight of the dates, may be:

Affected by decay.

CHART NO. II—ALLOWANCES AND LIMITATIONS FOR DEFECTS IN WHOLE AND PITTED DATES OR IN WHOLE DRY DATES FOR PROCESSING; U.S. GRADE B OR U.S. CHOICE AND U.S. GRADE B (DRY) OR U.S. CHOICE (DRY)

Not more than 15 percent, by weight of the dates, may be seriously damaged by checking.

Not more than 20 percent, by weight of the dates, may be damaged by broken skin.

ADDITIONAL ALLOWANCE

Not more than a total of 15 percent, by weight of the dates, may be the following:

Damaged by:
- Deformity.
- Puffiness.
- Scars.
- Sunburn.
- Insect injury.
- Improper hydrating.
- Mashing.
- Mechanical injury.
- Lack of pollination.
- Blacknose.
- Side spot.
- Black scald.
- Improper ripening.
- Other defects.

Seriously damaged by puffiness.
Affected by:
- Souring.
- Mold.
- Dirt.
- Insect infestation.
- Foreign material.
- Decay.

LIMITATIONS

Not more than ⅔ of the additional allowance, or 10 percent, by weight of the dates, may be the following:

Damaged by:
- Lack of pollination.
- Blacknose.
- Side spot.
- Black scald.
- Improper ripening.
- Other defects.

Affected by:
- Souring.
- Mold.
- Dirt.
- Insect infestation
- Foreign material.
- Decay.

Not more than ⅓ of the additional allowance, or 5 percent, by weight of the dates, may be the following:

Damaged by:
- Improper ripening.
- Other defects.

- Affected by:
  - Souring.
  - Mold.
  - Dirt.
  - Insect infestation.
  - Foreign material.
  - Decay.

Not more than 1/15 of the additional allowance, or 1 percent, by weight of the dates, may be:

- Affected by decay.

Chart No. III—Allowances and Limitations for Defects in Whole and Pitted Dates or in Whole Dry Dates for Processing; U.S. Grade C or U.S. Standard and U.S. Grade C (Dry) or U.S. Standard (Dry)

TOTAL ALLOWANCE

Not more than a total of 20 percent, by weight of the dates, may be the following.

- Damaged by:
  - Deformity.
  - Scars.
  - Sunburn.
  - Insect injury.
  - Improper hydrating.
  - Mashing.
  - Mechanical injury.
  - Lack of pollination.
  - Blacknose.
  - Side spot.
  - Black scald.
  - Improper ripening.
  - Other defects.
- Seriously damaged by puffiness
- Affected by:
  - Souring.
  - Mold.
  - Dirt.
  - Insect infestation.
  - Foreign material.
  - Decay.

LIMITATIONS

Not more than ½ of the total allowance, or 10 percent, by weight of the dates, may be the following.

- Damaged by:
  - Lack of pollination
  - Blacknose.
  - Side spot.
  - Black scald.
  - Improper ripening.
  - Other defects.
- Affected by:
  - Souring.
  - Mold.
  - Dirt.
  - Insect infestation.
  - Foreign material.
  - Decay.

Not more than ¼ of the total allowance, or 5 percent, by weight of the dates, may be the following:

- Affected by
  - Souring.
  - Mold.
  - Dirt.
  - Insect infestation.
  - Foreign material.
  - Decay.

Not more than 1/10 of the total allowance, or 2 percent, by weight of the dates, may be:

- Affected by decay.

§ 52.1009 Character.

(a) (*A*) *classification.* Whole or pitted dates that possess a good character may be given a score of 36 to 40 points. "Good character" means that not less than 75 percent, by weight, of the dates are well developed, well fleshed, and soft, or at the time of packing are in a state of ripeness that within 15 days will develop into such character; and the remainder may possess a reasonably good character including not more than a total of 2 percent, by weight, of the dates that may possess semi-dry calyx ends and none may possess dry calyx ends.

(b) (*B*) *classification.* If the whole or pitted dates or whole dry dates for processing possess a reasonably good character, a score of 32 to 35 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice or U.S. Grade B (Dry) or U.S. Choice (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule).

(1) "Reasonably good character" with respect to whole or pitted dates other than whole dry dates for processing means that the dates are pliable; that not less than 75 percent, by weight, of the dates are reasonably well developed and reasonably well fleshed, or at time of packing are in a state of ripeness that within 15 days will develop into such character and the remainder may possess a fairly good character including not more than 10 percent, by weight, of the dates that may possess semi-dry calyx ends and dry calyx ends: *Provided,* That not more than 2 percent, by weight, of the dates may possess dry calyx ends.

(2) "Reasonably good character" with respect to whole dry dates for processing means that the dates may be firm and dry; that not less than 75 percent, by weight, of the dates are reasonably well developed and reasonably well fleshed and that the remainder are fairly well developed and fairly well fleshed.

(c) (*C*) *classification.* If the whole or pitted dates, whole dry dates for processing, date pieces, or macerated dates possess a fairly good character, a score of 28 to 31 points may be given. Dates that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard or U.S. Grade C (Dry) or U.S. Standard (Dry), whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Fairly good character" has the following meanings with respect to the following styles:

(1) *Whole; pitted.* (i) In whole or pitted dates other than whole dry dates for processing the dates may be firm but are pliable; may possess semidry calyx ends; and not less than 80 percent, by weight, of the dates are fairly well developed and are fairly well fleshed, or at time of packing are in a state of ripeness that within 15 days will develop into such character and the remainder may fail to possess such fairly good character or may possess dry calyx ends.

(ii) In whole dry dates for processing the dates may be firm and dry but are fairly well developed and fairly well fleshed.

(2) *Pieces; macerated.* The character may be variable throughout the units or mass but not seriously affected by dry calyx end material or inedible portions of dates.

(d) (*SStd*) *classification.* Dates that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1010 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1011 Score sheet for dates.

Size and kind of container ....
Container mark or identification..........
Label or brand..........
Net weight ....
Style..........
Count (per lb.)..........
Moisture content (if determined) ....
One variety (☐) Yes (☐) No ....

Factors		Score points	
Color	20	(A)	18–20
		(B)(B-Dry)	[1] 16–17
		(C) (C-Dry)	[1] 14–15
		(SStd)	[1] 0–13
Uniformity of size.	10	(A)	9–10
		(B) (B-Dry)	[1] 8
		(C) (C-Dry)	[1] 7
		(SStd)	[1] 0–6
Absence of defects.	30	(A)	27–30
		(B) (B-Dry)	[1] 24–26
		(C) (C-Dry)	[1] 21–23
		(SStd)	[1] 0–20
Character	40	(A)	36–40
		(B) (B-Dry)	[1] 32–35
		(C) (C-Dry)	[1] 28–31
		(SStd)	[1] 0–27
Total score......	100		

Grade ....

[1] Limiting rule.

Subpart—United States Standards for Grades of Dried Figs

SOURCE: 20 FR 8683, Nov. 26, 1955; 20 FR 9171, Dec. 10, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, COLOR TYPES, STYLES, SIZES, GRADES

§ 52.1021 Product description.

Dried figs are the fruit of the fig tree (Ficus carica) from which the greater portion of moisture has been removed. The dried figs are prepared from clean and sound fruit and are sorted and thoroughly cleaned to assure a clean, sound, wholesome product. The figs may or may not be sulphured or otherwise bleached.

§ 52.1022 Color types of dried figs.

(a) *"White."* "White figs" (or "white type" figs) are white to dark brown in color and include such varieties as Adriatic, Calimyrna, and Kadota.

(b) *"Black."* "Black figs" (or "black type" figs) are black or dark purple in color as in the Mission varieties.

§ 52.1023 Styles and types of packs of dried figs.

(a) *Style I, Whole.* "Style I, Whole" (or "whole figs") means dried figs in any of the following types of packs:

(1) "Whole, loose, figs", referred to as Style I (a), are whole dried figs, not materially changed from their original dried form, that are packed without special arrangement in a container.

(2) "Whole, pulled, figs", referred to as Style I (b), are whole dried figs which are changed from their original dried form by purposely flattening and shaping and are placed in a definite arrangement in a container. The dried figs may or may not be split slightly across the eye but are not split to the extent that the seed cavity is materially exposed.

(3) "Whole, layered, figs", referred to as Style I (c), are whole dried figs which are changed from their original dried form by purposely flattening and shaping and are placed in a staggered-layer arrangement in a container. The figs are split across the base to the extent that the seed cavity may be materially exposed.

(b) *Style II, Sliced.* "Style II, Sliced" (or "sliced figs") means dried whole figs that have been cut into slices not less than 1/4 inch in thickness and such slices are not recut showing more than two cut surfaces.

§ 52.1024 Sizes of Style I (a), whole, loose, dried figs.

(a) *Sizes.* The sizes of Style I(a), whole, loose, dried figs for the respective varieties are as follows:

Adriatic or Kadota

No. 1 size (jumbo size)—1 9/16 inches or larger in width.

No. 2 size (extra fancy size)—1 5/16 inches to, but not including, 1 9/16 inches in width.

No. 3 size (fancy size)—1 3/16 inches to, but not including, 1 5/16 inches in width.

No. 4 size (extra choice size)—1 1/16 inches to, but not including, 1 3/16 inches in width.

No. 5 size (choice size)—15/16 inch to, but not including, 1 1/16 inches in width.

No. 6 size (standard size)—Less than 15/16 inch in width.

Calimyrna

No. 1 size (jumbo size)—1 9/16 inches or larger in width.

No. 2 size (extra fancy size)—1 6/16 inches to, but not including, 1 9/16 inches in width.

No. 3 size (fancy size)—1 3/16 inches to, but not including, 1 6/16 inches in width.

No. 4 size (extra choice size)—1 1/16 inches to, but not including, 13/16 inches in width.

No. 5 size (choice size)—15/16 inch to, but not including, 1 1/16 inches in width.

No. 6 size (standard size)—Less than 15/16 inch in width.

Black Mission

No. 1 size (jumbo size)—1 5/16 inches or larger in width.

No. 2 size (extra fancy size)—1 3/16 inches to, but not including, 1 5/16 inches in width.

No. 3 size (fancy size)—1 1/16 inches to, but not including, 1 3/16 inches in width.

No. 4 size (extra choice size)—15/16 inch to, but not including, 1 1/16 inches in width.

No. 5 size (choice size)—13/16 inch to, but not including, 15/16 inch in width.

No. 6 size (standard size)—Less than 13/16 inch in width.

(b) *Ascertaining compliance for a single size.* In ascertaining compliance with the size requirements of this section, Style I (a), whole, loose, dried figs will be considered as a single size if not less than 80 percent by count of the figs are of one predominant size and not more than 14 percent by count of the figs are of a size or sizes smaller than that predominating size and not more than 6 percent by count of the figs are of a size or sizes larger than that predominating size. "Uniformity of size", as such, is not a grade requirement for Style I (a), whole, loose, dried figs.

§ 52.1025 Grades of dried figs.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of whole or sliced dried figs in which Style I, whole figs, are of one variety and in which Style II, sliced figs, are of one variety or similar varieties; that are well-matured with not more than 5 percent, by count, of reasonably well-matured dried figs; that are practically uniform in size, except for Style I (a), whole, loose, figs and Style II, sliced figs; that possess a practically uniform typical color; that possess a good flavor; that are free from foreign material; and that do not exceed the maximum allowances and limitations as specified in Table I (Moisture) and Table IIA (Defects in White Figs) and Table IIB (Defects in Black Figs).

(b) "U.S. Grade B" or "U.S. Choice" is the quality of whole or sliced dried figs in which Style I, whole figs, are of one variety and in which Style II, sliced figs, are of one variety or similar varieties; that are reasonably well-matured with not more than 10 percent, by count, of fairly well-matured dried figs; that are reasonably uniform in size, except for Style I (a), whole, loose, figs and Style II, sliced figs; that possess a reasonably uniform typical color; that possess a reasonably good flavor; that are free from foreign material; and that do not exceed the maximum allowances and limitations as specified in Table I (Moisture) and Table IIIA (Defects in White Figs) and Table IIIB (Defects in Black Figs).

(c) "U.S. Grade C" or "U.S. Standard" is the quality of whole or sliced dried figs that are of one variety or of similar varieties; that are fairly well-matured with not more than 10 percent, by count, of figs that fail to meet the requirements for fairly well-matured dried figs; that are fairly uniform in size, except for Style I (a), whole, loose, figs and Style II, sliced figs; that possess a fairly uniform typical color; that possess a typical and normal flavor; that are free from foreign material; and that do not exceed the maximum allowances and limitations as specified in Table I (Moisture) and Table IVA (Defects in White Figs) and Table IVB (Defects in Black Figs).

(d) "Substandard" is the quality of dried figs that fail to meet the requirements of "U.S. Grade C" or "U.S. Standard."

Moisture Allowances

§ 52.1026 Moisture allowances for grades of dried figs.

(a) *Moisture limits.* Dried figs shall not exceed the moisture limits for the grades, color types, styles, and groups designated in Table I of this section. Group I includes figs in containers which do not completely enclose and seal the figs; such containers include, but are not limited to, wood boxes or fiber boxes. Group II includes figs packaged in completely sealed packages; such containers include, but are not limited to, cellophane, pliofilm, metal-foil wrapped bags or cartons, and hermetically sealed glass or metal containers.

TABLE I—MOISTURE ALLOWANCES FOR DRIED FIGS

Grades	Color types	Styles	Maximum moisture limits (by weight)	
			Group I (percent)	Group II (percent)
U.S. Grade A or U.S. Fancy and U.S. Grade B or U.S. Choice and U.S. Grade C or U.S. Standard.	White	Whole	[1] 24	30
	White	Sliced	[1] 23	
	Black	Whole	[1] 23	30
	Black	Sliced	[1] 23	
	Black and White (mixed)	Whole	[1] 23	30
	Black and White (mixed)	Sliced	[1] 23	

[1] Except Dried Figs of this group may have a maximum moisture of 30 percent when a safe and suitable mold inhibitor is used.

[20 FR 8683, Nov. 26, 1955, as amended at 32 FR 921, Jan. 26, 1967. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

DEFECT ALLOWANCES

§ 52.1027 Allowances for defects in dried figs.

The following tables in this section summarize the total maximum allowances and maximum limitations within the total allowances for the respective grades and styles as follows:

(a) U.S. Grade A or U.S. Fancy; Styles I and II:

Table II A—White figs.
Table II B—Black figs.

(b) U.S. Grade B or U.S. Choice; Styles I and II:

Table III A—White figs.
Table III B—Black figs.

(c) U.S. Grade C or U.S. Standard; Styles I and II:

Table IV A—White figs.
Table IV B—Black figs.

TABLE II A—ALLOWANCES FOR DEFECTS IN WHITE FIGS

[Style I, Whole; Style II, Sliced, except as indicated otherwise]

Grade	Total allowance [1]—Not more than a total of 5 percent [2]	Limited allowance—Not more than 3/5 of the total or 3 percent [2]
U.S. Grade A or U.S. Fancy.	Damaged by: scars or disease, sunburn, mechanical injury,[3] visible sugaring, other similar defects.	
	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.

[1] Total maximum allowances: *Provided*, that the appearance or edibility of the product is not more than slightly affected by such defects or by the presence of otherwise defective units.

[2] Percentages are by count.

[3] Not applicable to Style II, Sliced figs.

TABLE II B—ALLOWANCES FOR DEFECTS IN BLACK FIGS

[Style I, Whole; Style II, Sliced, except as indicated otherwise]

Grade	Total allowance [1]—Not more than a total of 10 percent [2]	Limited allowance—Not more than 1/20 of the total or 5 percent [2]
U.S. Grade A or U.S. Fancy.	Damaged by: scars or disease, sunburn, mechanical injury,[2] visible sugaring, other similar defects.	
	Seriously damaged by: scars or disease, sunburn, mechanical injury,[2] other similar defects.	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.

[1] Total maximum allowances: *Provided*, that the appearance or edibility of the product is not more than slightly affected by such defects or by the presence of otherwise defective units.

[2] Percentages are by count.

[3] Not applicable to Style II, Sliced figs.

TABLE III A—ALLOWANCES FOR DEFECTS IN WHITE FIGS

[Style I, Whole; Style II, Sliced, except as indicated otherwise]

Grade	Total allowance [1]—Not more than a total of 10 percent	Limited allowance—Not more than ½ of the total or 5 percent [2]
U.S. Grade B or U.S. Choice.	Damaged by: scars or disease, sunburn, mechanical injury,[3] visible sugaring, other similar defects.	
	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.

Table III B—Allowances for Defects in Black Figs

[Style I, Whole; Style II, Sliced, except as indicated otherwise]

Grade	Total allowance [1]—Not more than a total of 15 percent [2]	Limited allowance—Not more than 7/15 of the total or 7 percent [2]
U.S. Grade B or U.S. Choice.	Damaged by: scars or disease, sunburn, mechanical injury,[3] visible sugaring, other similar defects.	
	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.

[1] Total maximum allowances: *Provided*, That the appearance or edibility of the product is not materially affected by such defects or by the presence of otherwise defective units.

[2] Percentages are by count.

[3] Not applicable to Style II, Sliced figs.

Table IV A—Allowances for Defects in White Figs

[Style I, Whole; Style II, Sliced, except as indicated otherwise]

Grade	Total allowance [1]—Not more than a total of 15 percent [2]	Limited allowance—Not more than 7/15 of the total or 7 percent [2]
U.S. Grade C or U.S. Standard.	Damaged by: scars or disease, sunburn, mechanical injury,[3] visible sugaring, other similar defects.	
	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.

See footnotes to table IV B.

Table IV B—Allowances for Defects in Black Figs

[Style I, Whole; Style II, Sliced, except as indicated otherwise]

Grade	Total allowance [1]—Not more than a total of 20 percent [2]	Limited allowance—Not more than 2/5 of the total or 8 percent [2]
U.S. Grade C or U.S. Standard.	Damaged by: scars or disease, sunburn, mechanical injury,[3] visible sugaring, other similar defects.	
	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.	Seriously damaged by: scars or disease, sunburn, mechanical injury,[3] other similar defects.

[1] Total maximum allowances: *Provided*, That the appearance or edibility of the product is not seriously affected by such defects or by the presence of otherwise defective units.

[2] Percentages are by count.

[3] Not applicable to Style II, Sliced figs.

DEFINITIONS AND EXPLANATIONS OF TERMS

§ 52.1028 Stages of maturity.

(a) *Well matured.* A "well-matured" dried fig means a dried fig which is well developed and in which the interior shows very good sugary tissue development that is sirupy and gumlike in consistency and texture.

(b) *Reasonably well matured.* A "reasonably well-matured" dried fig means a dried fig which is reasonably well developed and in which (1) the interior shows good sugary tissue development that is gummy but slightly fibrous in consistency and texture, or (2) one-third or less of the interior of the fig may be entirely lacking in sugary tissue, if the remainder of the interior of the fig is sirupy and gumlike in consistency and texture.

(c) *Fairly well matured.* A "fairly well-matured" dried fig means a dried fig which is fairly well developed and in which (1) the sugary tissue in the interior of the fig is gummy and fibrous in consistency and texture, or (2) one-third or less of the interior of the fig may be entirely lacking in sugary tissue, if the remainder of the interior of the fig is gummy but slightly fibrous in consistency and texture, or (3) more than one-third, but less than one-half, of the interior of the fig may be entirely lacking in sugary tissue, if the remainder of the interior of the fig is sirupy and gum-like in consistency and texture.

§ 52.1029 Degrees of uniformity of size.

Uniformity of size applies to Style I (b), whole, pulled, figs and Style I (c), whole, layered, figs, where the original shape has been materially changed.

(a) *Practically uniform in size.* "Practically uniform in size" means that not more than a total of 10 percent, by count, of dried figs may be conspicuously larger or smaller than the approximate average size of the dried figs in the container.

(b) *Reasonably uniform in size.* "Reasonably uniform in size" means that not more than a total of 15 percent, by count, of dried figs may be conspicuously larger or smaller than the approximate average size of the dried figs in the container.

(c) *Fairly uniform in size.* "Fairly uniform in size" means that not more than a total of 20 percent, by count, of dried figs may be conspicuously larger or smaller than the approximate average size of the dried figs in the container.

§ 52.1030 Degrees of uniformity of color.

(a) *White figs*—(1) *Practically uniform typical color.* "Practically uniform typical color" means, with respect to white varieties of dried figs that are light in color, that there may be not more than 5 percent, by count, of dried figs that are markedly dark figs; and, with respect to white varieties that are dark in color, that there may be not more than 5 percent, by count, of dried figs that are markedly light-colored figs.

(2) *Reasonably uniform typical color.* "Reasonably uniform typical color" means, with respect to white varieties of dried figs that are light in color, that there may be not more than 10 percent, by count, of dried figs that are markedly dark figs; and, with respect to white varieties that are dark in color, that there may be not more than 10 percent, by count, of dried figs that are markedly light-colored figs.

(3) *Fairly uniform typical color* "Fairly uniform typical color" means, with respect to white varieties of dried figs that are light in color or are very light green in color, that there may be not more than 20 percent, by count, of dried figs that are markedly dark figs; and, with respect to white varieties that are dark in color, that there may be not more than 20 percent, by count, of dried figs that are markedly light-colored figs.

(b) *Black figs*—(1) *Practically uniform typical color.* "Practically uniform typical color" means, with respect to Black varieties of dried figs, that the color is practically uniform and a typical natural black or dark reddish-brown color of dried figs and that not more than 10 percent, by count, of the dried figs may be, singly or in combination:

(i) Affected by very light-colored scars which are not calloused and which, singly or in the aggregate on a whole dried fig, are more than one-eighth but less than one-half of the exterior surface of the dried fig; or

(ii) Seriously damaged by scars or disease (as defined in § 52.1031(b)) which affect the color of the dried fig.

(2) *Reasonably uniform typical color* "Reasonably uniform typical color" means, with respect to Black varieties of dried figs, that the color is reasonably uniform and a typical natural black or dark reddish-brown color of dried figs and that not more than 20 percent, by count, of the dried figs may be, singly or in combination:

(i) Affected by very light-colored scars which are not calloused and which, singly or in the aggregate on a whole dried fig, are more than one-fourth but less than one-half of the exterior surface of the dried fig; or

(ii) Seriously damaged by scars or disease (as defined in § 52.1031(b)) which affect the color of the dried fig.

(3) *Fairly uniform typical color.* "Fairly uniform typical color" means, with respect to Black varieties of dried figs, that the color is fairly uniform and a typical natural black or dark reddish-brown color of dried figs and that not more than 30 percent, by count, of the dried figs may be, singly or in combination:

(i) Affected by very light-colored scars which are not calloused and which, singly or in the aggregate on a whole dried fig, are more than one-fourth but less than one-half of the exterior surface of the dried fig; or

(ii) Seriously damaged by scars or disease (as defined in § 52.1031(b)) which affect the color of the dried fig.

§ 52.1031 Definitions of defects.

(a) *Damaged by scars or disease.* "Damaged by scars or disease" means that the area of tough or calloused scars, singly or in the aggregate on a dried fig or portion of a dried fig, is equal to, or exceeds, the area of a circle ⅜ inch in diameter but is less than the area of a circle ½ inch in diameter.

(b) *Seriously damaged by scars or disease.* "Seriously damaged by scars or disease" means that the area of tough or calloused scars, singly or in the aggregate on a dried fig or portion of a dried fig, is equal to, or exceeds, the area of a circle ½ inch in diameter. Figs which possess very light-colored scars that are not calloused are considered as "seriously damaged by scars" if such scars, singly or in the aggregate on a whole dried fig, are equal to one-half or more of the exterior surface of the dried fig.

(c) *Damaged by sunburn.* "Damaged by sunburn" means any substantial damage from excessive heat to the skin evidenced by dry and tough surface areas.

(d) *Seriously damaged by sunburn.* "Seriously damaged by sunburn" means any substantial damage from excessive heat to the skin evidenced by dry and tough surface areas and which damage is accompanied by a lack of sugary tissue affecting one-third or more of the interior of a dried fig.

(e) *Damaged by mechanical injury.* "Damaged by mechanical injury" in Styles I (a), (b), and (c)—whole loose, whole pulled, and whole layered—dried figs means skin breaks that more than slightly affect the appearance of the product.

(f) *Seriously damaged by mechanical injury.* "Seriously damaged by mechanical injury" means injury to the styles of whole dried figs as follows: (1) In Style I (a), Whole, loose, figs and Style I (b), Whole, pulled, figs, the seed tissue is mashed out beyond the outer wall or there are excessive skin breaks which affect materially the appearance of the dried figs for the applicable style; (2) in Style I (c), Whole, layered, figs, there are excessive skin breaks (other than the normal splitting for the style) to the extent that a dried fig cannot be identified as a whole, layered, fig.

(g) *Damaged by visible sugaring.* "Damaged by visible sugaring" means white sugar crystals which form on the exterior surface of a dried fig or portion of a dried fig so as to damage materially the appearance. Units showing a few lightly sugared spots are not considered as "Damaged by visible sugaring" unless singly or in combination with other defective units they affect the appearance or edibility, or both, for the respective grade.

(h) *Damaged by other similar defects.* "Damaged by other similar defects" includes any exposed (external or cut surface) injury or defect not specifically mentioned (such as abnormally discolored areas other than from scars, disease, or sunburn) which more than slightly affects the appearance, edibility, or keeping quality of the dried figs, except that stems which attach the fig to the twig of the tree are not considered as "damage by other similar defects."

(i) *Seriously damaged by other similar defects.* "Seriously damaged by other similar defects" includes any exposed (external or cut surface) injury or defect not specifically mentioned (such as abnormally discolored areas other than from scars, disease, or sunburn) which affects materially the appearance, edibility, or keeping quality of the dried figs, except that stems which attach the fig to the twig of the tree are not considered as "seriously damaged by other similar defects."

§ 52.1032 Degrees of flavor and odor.

(a) *Good flavor.* "Good flavor" means a clean and distinct dried fig flavor and odor free from any flavors or odors such as are characteristic of scorching or caramelization and free from other slight abnormal flavors or odors.

(b) *Reasonably good flavor.* "Reasonably good flavor" means a clean and distinct dried fig flavor and odor which may possess very slight flavors or odors such as are characteristic of slight scorching or slight caramelization or may possess other very slight abnormal flavors or odors.

(c) *Typical and normal flavor.* "Typical and normal flavor" means a clean and distinct dried fig flavor and odor which may possess slight flavors or odors such as are characteristic of scorching or caramelization but may not possess any flavor in amounts resulting in objectionable or off flavors.

WORK SHEET

§ 52.1033 Work sheet for grades of dried figs.

Size and kind of container ....
Container mark or identification ....
Label or brand ....
Net weight ....
Color type ( ) White ( ) Black ....
Style (type of pack) ....
Size or sizes (whole, loose, figs): .....% Size ....., ...% Size .....; .....% Size ....
Moisture content ....
Varietal characteristics: Similar ..... Mixed ....%
Uniformity of color:
  White: Marked variation from Light ..... Dark ....
  Black: .... Uniform; Natural Black ....%
    Very light scars (uncalloused, etc.) ....
Uniformity of size: (Whole, pulled, and layered). Conspicuously larger .....; smaller ....%
Maturity and development: ....%
  (A) Well-matured ....
  (B) Reasonably well-matured ....%
  (C) Fairly well-matured ....%
Flavor and odor: (A), (B), (C) ....%
Count (per sample) ....

Defects	White figs			Black figs			
	A	B	C	A	B	C	
Seriously damaged by: scars or disease, sunburn, mechanical injury,[1] other defects (percent)	3%	5%	7%	5%	7%	8%	%
	Subtotal abovn defects						
Damaged by: scars or disease, sunburn, mechanical injury,[1] visible sugaring, other similar defects							
Grand total all defects (percent)	5%	10%	15%	10%	15%	20%	%
U.S. Grade (including all factors)							

[1] "Damaged or seriously damaged by mechanical injury" is not applicable to any grade of Style II sliced figs.

Subpart—United States Standards for Grades of Canned Fruit Cocktail

SOURCE: 38 FR 13327, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY AND GRADES

§ 52.1051 Product description.

"Canned fruit cocktail" is the product represented as defined in the Standards of Identify (21 CFR 145.135(a) and 145.136) for canned fruit cocktail and canned artificially sweetened fruit cocktail, respectively, issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[41 FR 15022, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1052 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned fruit cocktail that is practically free from defects; that possesses a good character; that possesses a normal flavor and odor; and that is of such quality with respect to clearness of liquid media, color, and uniformity of size as to score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned fruit cocktail that possesses a fairly clear liquid media; that is reasonably uniform in size; that is reasonably free from defects; that possesses a reasonably good character; that possesses a normal flavor and odor; and that is of such quality with respect to color as to score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned fruit cocktail that fails to meet the requirements of U.S. Grade B or U.S. Choice and is the quality of canned fruit cocktail that may or may not meet the minimum standard of quality for canned fruit cocktail issued pursuant to the Federal Food, Drug, and Cosmetic Act.

PROPORTIONS

§ 52.1053 Proportion of fruit ingredient.

Canned fruit cocktail shall contain the fruit ingredients in the proportions indicated in table I.

TABLE I

Fruit ingredient	Style	Proportion	
		Not less than—	Not more than—
Peaches (any yellow variety)	Diced	30 percent by weight of drained fruit.	50 percent by weight of drained fruit.
Pears (any variety)	Diced	25 percent by weight of drained fruit.	45 percent by weight of drained fruit.
Grapes (any seedless variety)	Whole	6 percent by weight of drained fruit.	20 percent by weight of drained fruit.
Pineapple (any variety)	Diced or sectors.	6 percent by weight of drained fruit, but not less than 2 sectors or 3 dice for each 4½ oz avdp of product and each fraction thereof greater than 2 oz.	16 percent by weight of drained fruit.
Cherries (any light, sweet variety) or (artificially colored red) or (artificially colored red and artificially flavored).	Approximate halves.	2 percent by weight of drained fruit; but not less than 1 approximate half for each 4½ oz avdp of product and each fraction thereof greater than 2 oz.	6 percent by weight of drained fruit.

LIQUID MEDIA, FILL OF CONTAINER, AND FILL WEIGHTS

§ 52.1054 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned fruit cocktail are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurement, as applicable, for the respective designations are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s).".	22° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s).".	18° or more but less than 22°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s).".	14° or more but less than 18°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s).".	10° or more but less than 14°.
"In water"	Not applicable.
"In fruit juice(s) and water"	Do.
"In fruit juice(s)"	Do.
"Artificially sweetened"	Do.

[38 FR 13327, May 21, 1973, as amended at 41 FR 15022, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1055 Fill of container.

(a) *General.* The standard of fill of container for canned fruit cocktail is a fill such that the total weight of drained fruit is not less than 65 percent of the water capacity of the container. Canned fruit cocktail that does not meet this requirement is "Below Standard in Fill".

(b) *Method for ascertaining drained weight.* The drained weight of canned fruit cocktail is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-inch ±3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and fruit cocktail less the weight of the dry sieve. The diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more.

(c) *Definitions of symbols.* (1) X_d—the average drained weight of all the sample units in the sample.

(2) LL—lower limit for drained weights of individual sample units.

(d) *Compliance with drained weights.* A lot of canned fruit cocktail is considered as meeting the minimum drained weight requirements if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meet the minimum average drained weight (designated as "X_d" in table II); and

(2) The number of sample units which fail to meet the drained weight lower limit for individuals (designated as "LL" in table II) does not exceed the applicable acceptance number specified in the single sampling plan of table III.

TABLE II

[Minimum Drained Weight for Canned Fruit Cocktail]

Container designation (metal, unless otherwise stated)	Container size		Capacity weight, H_2O at 68° F (avoirdupois ozs.)	Minimum drained weight (65 percent capacity) (ounces)	
	Overall dimensions	Overflow capacity (fluid ozs.)		*LL*	X_d
5 oz	211x600		4.90	2.8	3.18
5 oz	211x202		5.25	3.0	3.41
6 oz	300x200			3.6	3.97
7 oz	211x212		7.15	4.2	4.64
8Z tall	211x304		8.65	5.1	5.63
8 oz glass		8.2	8.50	5.0	5.53
No. 300	300x407		15.20	9.3	9.88
No. 1 tall	301x411		16.60	10.1	10.79
No. 303	303x406		16.85	10.3	10.96
303 glass		17.0	17.70	10.8	11.51
No. 2	307x409		20.50	12.5	13.33
No. 2½	401x411		29.75	18.3	19.34
No. 2½ glass		28.35	29.50	18.2	19.18
No. 3 cylinder	404x700			32.3	33.57
No. 10	603x700		109.45	69.4	71.15

TABLE III—Single Sampling Plan for Drained Weights

Sample size (number of sample units)	3	6	13	21	29	38	48	60	72
Acceptance No	0	1	2	3	4	5	6	7	8

§ 52.1056 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations specified in table IV are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weight.* Fill weight is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the minimum lot average fill weight.

LWL_x means the lower warning limit for subgroup averages.

LRL_x means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R′ means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the sampling allowance chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE IV—RECOMMENDED FILL WEIGHT VALUES CANNED FRUIT COCKTAIL

Container designation (metal, unless otherwise designated)	X'_{min}	LWL_x	LRL_x	LWL	LRL	R′	R_{max}	Sampling allowance code
5 oz—211 x 200	3.4	3.2	3.0	2.9	2.6	0.60	1.20	D
5 oz—211 x 202	3.7	3.5	3.3	3.2	2.9	.60	1.20	D
6 oz—300 x 200	4.3	4.1	3.9	3.8	3.5	.60	1.20	D
7 oz—211 x 212	5.0	4.8	4.6	4.5	4.2	.60	1.20	D
8Z tall—211 x 304	6.1	5.9	5.7	5.6	5.3	.60	1.20	D
8Z glass—8.5 oz avoirdupois	6.0	5.8	5.7	5.5	5.2	.60	1.20	D
No. 300—300 x 407	10.6	10.2	10.0	9.8	9.4	0.9	2.0	G
No. 1 tall—301 x 411	11.5	11.1	10.9	10.6	10.1	1.1	2.2	H
No. 303—303 x 406	11.7	11.3	11.1	10.8	10.3	1.1	2.2	H
303 glass—17.7 oz avoirdupois	12.3	11.9	11.7	11.4	10.9	1.1	2.2	H
No. 2—307 x 409	14.3	13.8	13.6	13.3	12.8	1.2	2.5	I
No. 2½—401 x 411	20.7	20.2	20.0	19.6	19.0	1.3	2.7	J
No. 2½ glass—29.5 oz avoirdupois	20.5	20.0	19.8	19.4	18.8	1.3	2.7	J
No. 10—603 x 700	77.0	75.9	75.4	74.6	73.4	2.8	5.9	U

FACTORS OF QUALITY

§ 52.1057 Ascertaining the grade.

(a) The grade of canned fruit cocktail is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of clearness of liquid media, color, uniformity of size, absence of defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Clearness of liquid media	20
Color	20
Uniformity of size	20
Absence of defects	20
Character	20
Total score	100

(c) "Normal flavor and odor" means that the canned fruit cocktail is free from objectionable flavors and objectionable odors of any kind.

§ 52.1058 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1059 Clearness of liquid media.

(a) (*A*) *classification.* Canned fruit cocktail that possesses a reasonably clear liquid media may be given a score of 17 to 20 points. "Reasonably clear liquid media" means that the liquid drained from the fruit cocktail is reasonably bright in color without any tinge of pink color or dullness of color and may contain fine fruit particles which do not materially affect the appearance of the product.

(b) (*B*) *classification.* If the canned fruit cocktail possesses a fairly clear liquid media, a score of 14 to 16 points may be given. "Fairly clear liquid media" means that the liquid drained from the fruit cocktail may be slightly pink or slightly dull in color but is not off color for any reason and may contain fruit particles which materially affect, but do not seriously affect, the appearance of the product.

(c) (*SStd*) *classification.* Canned fruit cocktail that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1060 Color.

(a) *General.* The factor of color refers to the general brightness and uniformity of color typical of each of the fruit ingredients; the degree of freedom from staining from artificially colored cherries, if present; and the dullness or off color in any single fruit ingredient.

(b) (*A*) *classification.* Canned fruit cocktail that possesses a good color may be given a score of 17 to 20 points. "Good color" means that each fruit ingredient possesses a practically uniform typical color that is bright and characteristic of at least reasonably well-matured fruit that has been properly prepared and processed; that any of the fruit ingredients may be no more than slightly affected by pink staining; and that none of the fruit ingredients are dull or off color for reasons other than being slightly affected by pink staining.

(c) (*B*) *classification.* If the canned fruit cocktail possesses a reasonably good color, a score of 14 to 16 points may be given. Canned fruit cocktail that falls into this classification because of staining or dullness of color shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a partial limiting rule) "Reasonably good color" means that each fruit ingredient possesses a reasonably uniform typical color that is reasonably bright and characteristic of at least fairly well-matured fruit that has been properly prepared and processed; and that any of the fruit ingredients may be more than slightly affected by pink staining but not to the extent that the appearance is materially affected by this cause or may be slightly dull in color but none of the fruit ingredients are off color for reasons other than staining or dullness within these limits.

(d) (*SStd*) *classification.* Canned fruit cocktail that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1061 Uniformity of size.

(a) *General.* The factor of uniformity of size refers to the uniformity of size of intact halves of cherries and whole grapes and to the degree of deviation from the dimensions for diced units of peaches, pears, and pineapple or for sectors of pineapple, which dimensions approximate the following:

(1) Diced units are not more than three-fourths in. in greatest edge dimension and will not pass through the meshes of a sieve designated as five-sixteenths in. in table I of "Standard Specifications for Sieves," published March 1, 1940, in L.C. 584 of the National Bureau of Standards, U.S. Department of Commerce.

(2) Sectors of pineapple: The length of the outside arc is not more than three-fourths in. but is more than three-eighths in.; the thickness is not more than one-half in. but is more than five-sixteenths in.; the length (measured along the radius from the inside arc to the outside arc) is not more than 1¼ in. but is more than three-fourths in.

(b) (*A*) *classification.* Canned fruit cocktail in which each of the fruit ingredients are practically uniform in size may be given a score of 17 to 20 points. "Practically uniform in size" means that not more than 10 percent by weight of the peach units, of the pear units, or of the pineapple units if diced may fail to conform to the dimensions for diced units; that not more than 10 percent by weight of the pineapple units if in sectors may fail to conform to the dimensions for sectors of pineapple; that the largest whole grape does not weigh more than three times the weight of the smallest whole grape; and that the longest dimension on the cut surface of the largest intact cherry half does not exceed the longest dimension on the cut surface of the smallest intact cherry half by more than 33⅓ percent.

(c) (*B*) *classification.* If the canned fruit cocktail possesses fruit ingredients that are reasonably uniform in size, a score of 14 to 16 points may be given. Canned fruit cocktail in which more than 15 percent by weight of the peach units, of the pear units, or of the pineapple units if diced fail to conform to the dimensions for diced units and in which more than 15 percent by weight of the pineapple units if in sectors fail to conform to the dimensions for sectors of pineapple shall not be graded above U.S. Grade B (or U.S. Choice), regardless of the total score for the product (this is a partial limiting rule). "Reasonably uniform in size" means that not more than 20 percent by weight of the peach units, of the pear units, or of the pineapple units if diced may fail to conform to the dimensions for diced units; that not more than 20 percent by weight of the pineapple units if in sectors may fail to conform to the dimensions for sectors of pineapple; that the largest whole grape does not weigh more than four times the weight of the smallest whole grape; and that the longest dimension on the cut surface of the largest intact cherry half does not exceed the longest dimension on the cut surface of the smallest intact cherry half by more than 50 percent.

(d) (*SStd*) *classification.* Canned fruit cocktail which fails to meet the requirements of paragraph (c) of this section shall be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule); and if the canned fruit cocktail fails to meet the requirements of paragraph (c) of this section only because of the deviations from the dimensions of diced units of peaches, pears, or pineapple, or of sectors of pineapple, the canned fruit cocktail is also:

Below Standard in Quality
Good Food—Not High Grade

§ 52.1062 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material; from peach and pear peel; from pits or portions thereof; from capstems; from crushed or broken grapes; from broken cherry halves; from unevenly colored cherry halves; from blemished units; and from any other defects which detract from the appearance or edibility of the product.

(1) "Harmless extraneous material" means any vegetable substance not specifically mentioned herein as a defect that is harmless.

(2) A "pit or portion thereof" means any whole pit or piece of pit material, regardless of size.

(3) A "capstem" means a small woody stem which attaches a grape to the branch of a bunch of grapes. Capstems are considered as defects whether or not attached to a grape.

(4) A "crushed or broken grape" means a grape that is severely crushed so as to destroy its shape or that is severed into two separate parts. Portions or fragments of grapes that are the equivalent of one grape are considered as a grape in ascertaining compliance with percentages by count of grapes.

(5) A "broken cherry half" means any portion of a cherry that is definitely less than an apparent half or a definitely mutilated cherry half.

(6) An "unevenly colored cherry half" means, if the cherry halves are artificially colored, that the color in the cherry half is other than evenly distributed in the unit or other than uniform with the color of the other cherry halves.

(7) "Blemished" in the case of the peach, pear, grape, or cherry ingredients means blemished with scab, hail injury, scar tissue, objectionable pear seed cell material, objectionable portions of interior pear stems, or other abnormality which materially affects

the appearance of the unit; and in the case of the pineapple ingredient means any blemish or combination of blemishes on a unit which materially affects the appearance or edibility of the unit and includes, but is not limited to, any fruit eye or portion thereof which on the exposed portion exceeds the area of a circle one-sixteenth in. in diameter, brown spots, pieces of shell, bruised portions, or other similar blemishes.

(b) (*A*) *classification.* Canned fruit cocktail that is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that the product is practically free from harmless extraneous material, from pits or portions thereof, from the presence of peel, from loose capstems, and from any other defects not specifically mentioned that more than slightly affect the appearance or edibility of the product; and that, in addition, not more than the following defective units, as applicable for the ingredient, may be present:

(1) *Peach.* 5 percent, by weight, of the peach units may be blemished;

(2) *Pear.* 5 percent, by weight, of the pear units may be blemished;

(3) *Pineapple.* 5 percent, by weight, of the pineapple units may be blemished;

(4) *Grape.* 10 percent, by count, of the grapes in a container containing 10 grapes or more, and 1 grape in a container containing less than 10 grapes may be blemished; 5 percent, by count, of the grapes in a container containing 20 grapes or more, and 1 grape in a container containing less than 20 grapes may be crushed or broken; and 10 percent, by count, of the grapes in a container containing 10 grapes or more, and 1 grape in a container containing less than 10 grapes may have the capstem attached; and

(5) *Cherry.* 5 percent, by count, of the cherry halves in a container containing 20 cherry halves or more, and 1 cherry half in a container containing less than 20 cherry halves may be blemished; 5 percent, by count, of the cherry halves in a container containing 20 cherry halves or more and 1 cherry half in a container containing less than 20 cherry halves may be a broken cherry half; and 5 percent, by count, of the cherry halves in a container containing 20 cherry halves or more, and 1 cherry half in a container containing less than 20 cherry halves may be unevenly colored; *Provided,* That in all containers comprising the sample such blemished cherry halves do not exceed an average of 5 percent, by count, of the total number of cherry halves; such broken cherry halves do not exceed an average of 5 percent, by count, of the total number of cherry halves; and such unevenly colored cherry halves do not exceed an average of 5 percent, by count, of the total number of cherry halves.

(c) (*B*) *classification.* If the canned fruit cocktail is reasonably free from defects, a score of 14 to 16 points may be given. Canned fruit cocktail that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the product is practically free from harmless extraneous material and from pits or portions thereof; that the product is reasonably free from loose capstems and from any other defects not specifically mentioned that materially affect the appearance or edibility of the product; that not more than ¼ square inch of peach peel or of pear peel for each pound of net contents may be present; and that, in addition, not more than the following defective units as applicable for the ingredient, may be present:

(1) *Peach.* 10 percent, by weight, of the peach units may be blemished;

(2) *Pear.* 10 percent, by weight, of the pear units may be blemished;

(3) *Pineapple.* 12½ percent, by count, of the pineapple units may be blemished;

(4) *Grape.* 20 percent, by count, of the grapes may be blemished; 10 percent, by count, of the grapes in a container containing 10 grapes or more, and 1 grape in a container containing less than 10 grapes may be crushed or broken; and 10 percent, by count, of the grapes in a container containing 10 grapes or more, and 1 grape in a container containing less than 10 grapes may have the capstem attached; and

(5) *Cherry.* 15 percent, by count, of the cherry halves may be blemished; 15 percent, by count, of the cherry halves in a container containing more than 6 cherry halves, and 1 cherry half in a container containing 6 cherry halves or less may be a broken cherry half; and 15 percent, by count, of the cherry halves in a container containing more than 6 cherry halves, and 1 cherry half in a container containing 6 cherry halves or less may be unevenly colored.

(d) *(SStd) classification.* Canned fruit cocktail that fails to meet any of the requirements of paragraph (c) of this section shall be given a score of 0 to 13 points; shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule); and may or may not be:

Below Standard in Quality
Good Food—Not High Grade.

[38 FR 13327, May 21, 1973; 38 FR 15511, June 13, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1063 Character.

(a) *General.* The factor of character refers to the texture and tenderness for the fruit ingredients as prepared and processed for canned fruit cocktail.

(b) *(A) classification.* Canned fruit cocktail that possesses a good character may be given a score of 17 to 20 points. "Good character" means that each fruit ingredient is reasonably uniform in texture and tenderness with no more than slight disintegration and that the individual fruit ingredients meet the following requirements:

(1) *Peach.* The texture is typical of diced peaches prepared and processed from at least reasonably well-matured fruit and the units may range in tenderness from slightly firm to slightly soft but possess fairly well-defined edges;

(2) *Pear.* The texture is typical of diced pears prepared and processed from properly ripened pears or from pears of moderate graininess and the units may range in tenderness from slightly firm to slightly soft and may have slightly rounded edges;

(3) *Pineapple.* The units are practically uniform in ripeness with fruitlets of compact structure, are reasonably free from porosity, and are practically free from hard core material;

(4) *Grape.* The units are reasonably plump and reasonably firm; and

(5) *Cherry.* The units are reasonably firm.

(c) *(B) classification.* If the canned fruit cocktail possesses a reasonably good character, a score of 14 to 16 points may be given. Canned fruit cocktail that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that each fruit ingredient may range from a firm to soft texture without serious disintegration and that the individual fruit ingredients meet the following requirements:

(1) *Peach.* The texture is typical of diced peaches prepared and processed from at least fairly well-matured fruit and the units may range in tenderness from firm to soft and may possess frayed edges.

(2) *Pear.* The texture is typical of diced pears prepared and processed from properly ripened pears or from pears of marked graininess and the units may be lacking in uniformity of tenderness ranging from markedly firm to soft with rounded edges;

(3) *Pineapple.* The units are reasonably uniform in ripeness with fruitlets of reasonably compact structure, are fairly free from porosity, and are reasonably free from hard core material;

(4) *Grape.* The units may be variable in texture from firm to soft but not mushy or excessively flabby; and

(5) *Cherry.* The units may be fairly firm to soft but not excessively flabby.

(d) *(SStd) classification.* If the canned fruit cocktail fails to meet the requirements of paragraph (c) of this section, a score of 0 to 13 points may be given. Canned fruit cocktail that falls into this classification shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1064 Ascertaining the grade of a lot.

The grade of a lot of canned fruit cocktail covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (7 CFR 52.1 through 52.87).

SCORE SHEET

§ 52.1065 Score sheet.

Size and kind of container					....
Container mark or identification					....
Label					....
Net weight (ounces)					....
Vacuum (inches)					....
Drained weight (ounces):					....
( ) Meets fill of container					....
( ) Fails fill of container					....
Brix measurement					....
Sirup designation (extra heavy, heavy, etc.)					....
Proportions of fruit ingredients:					
Peach:	....oz	....%	( ) meets	( ) fails	....
Pear:	....oz	....%	( ) meets	( ) fails	....
Pineapple:	....oz	....%	( ) meets	( ) fails	....
Grape:	....oz	....%	( ) meets	( ) fails	....
Cherry:	....oz	....%	( ) meets	( ) fails	....
Total	.....oz	100%			
Count:					
Pineapple ( ) sectors ( ) diced					....
Cherry halves					....

Factors		Score points	
Clearness of liquid media.	20	(A)	17-20
		(B)	14-16
		(SStd)	[1]0-13
Color	20	(A)	17-20
		(B)	[2]14-16
		(SStd)	[1]0-13
Uniformity of size	20	(A)	17-20
		(B)	[2]14-16
		(SStd)	[1]0-13
Absence of defects	20	(A)	17-20
		(B)	[1]14-16
		(SStd)	[1]0-13
Character	20	(A)	17-20
		(B)	[1]14-16
		(SStd)	[1]0-13
Total score	100		
Normal flavor and odor			....
Grade			....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Fruit Jelly

SOURCE: 44 FR 45602, Aug. 3, 1979, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.1081 Identity.

(a) *"Fruit jelly (standardized)"*, means fruit jelly as defined in the definitions and standards of identity for fruit jelly (21 CFR 150.140), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(b) *"Fruit jelly (nonstandardized)"*, means and includes jelly made from any suitable fruit(s) not covered by the definitions and standards of identity for fruit jelly (21 CFR 150.140), issued pursuant to the Federal Food, Drug, and Cosmetic Act. Such nonstandardized fruit jelly shall, except for the kind of fruit used, otherwise comply with all of the provisions of the definitions and standards of identity for fruit jelly previously cited: *Provided*, That a fruit/sugar ratio of 27/55 for black currant may be used.

(c) *"Nonfruit jelly (nonstandardized)"*, means a jelly made from any suitable nonfruit ingredient whose characterizing flavor is not fruit and which contains no artifical flavor. The nonfruit ingredient shall be prepared in a manner similar to that of a fruit for use in fruit jelly. The finished product shall have a soluble solids content of not less than 65 percent and have organoleptic properties typical of the name of the product.

(d) Federal inspection certificates will indicate compliance wih the standard of identity and with the identity statements in paragraphs (b) and (c) of this section to establish the ingredients or proportion of ingredients only when these factors are determined during the process of manufacture.

(e) Nonstandardized fruit or nonstandardized nonfruit jelly identified in paragraphs (b) and (c) of this section that are prepared by using abnormally large amounts of pectin or acid, or both, are not covered by these standards.

§ 52.1082 Types and kinds of jelly.

(a) *Type I*—Standardized. Prepared from a single variety of fruit juice ingredient (21 CFR 150.140).

(b) *Type II*—Standardized. Prepared from a mixture of two or more varieties of fruit juice ingredients (21 CFR 150.140).

(c) *Type III*—Nonstandardized. Prepared from a single variety of fruit or nonfruit juice ingredient.

(d) *Type IV*—Nonstandardized. Prepared from a mixture of two or more varieties of fruit and/or nonfruit juice ingredient(s), and which may include one or more of the fruits listed in § 52.1083.

§ 52.1083 Kinds of fruit jelly—Standardized.

Apple.
Apricot.
Blackberry (other than dewberry).
Black raspberry.
Boysenberry.
Cherry.
Crabapple.
Cranberry.
Damson, damson plum.
Dewberry (other than boysenberry, loganberry, and youngberry).
Fig.
Gooseberry.
Grape.
Grapefruit.
Greengage, greengage plum.
Guava.
Loganberry.
Orange.
Peach.
Pineapple.
Plum (other than damson, greengage, and prune).
Pomegranate.
Prickly pear.
Quince.
Raspberry, red raspberry.
Red currant, currant (other than black currant).
Strawberry.
Youngberry.

§ 52.1084 Grades of jelly.

(a) *U.S. Grade A* is the quality of jelly that has a good consistency; has a bright typical color; is free from defects; has a distinct and normal flavor; and scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) *U.S. Grade B* is the quality of jelly that has a reasonably good consistency; has a reasonably bright typical color; is free from defects; has a reasonably good and normal flavor; and scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) *Substandard* is the quality of jelly that fails to meet the requirements of U.S. Grade B.

§ 52.1085 Recommended fill of container.

It is recommended that the container be filled with jelly as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the capacity of the container.

§ 52.1086 Determining the grade.

The grade of jelly may be determined by considering, in addition to the requirements of the respective grade, consistency, color, and flavor. The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Consistency	40
Color	20
Flavor	40
Total Score	100

§ 52.1087 Determining the rating for each factor.

The essential variations within each factor are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "36 to 40 points" means 36, 37, 38, 39, or 40 points).

§ 52.1088 Consistency.

(a) *General.* The factor of consistency refers to the gel strength of the product.

(b) *Grade A.* Jelly that has a good consistency may be given a score of 36 to 40 points. "Good consistency" means that the jelly has a tender to slightly firm texture and retains a compact shape without excessive syneresis ("weeping").

(c) *Grade B.* Jelly that has a reasonably good consistency may be given a score of 32 to 35 points. Jelly that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good consistency" means that the jelly may lack firmness but it is not sirupy; and that it may be more than slightly firm but is not tough or rubbery.

(d) *Substandard (SStd).* Jelly that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1089 Color.

(a) *Grade A.* Jelly that has a bright typical color may be given a score of 18 to 20 points. "Bright typical color" means that the color is characteristic of the juice ingredient(s) and that the jelly has a sparkling luster or may be not more than slightly cloudy, and is free from any dullness of color.

(b) *Grade B.* Jelly that has a reasonably bright typical color may be given a score of 16 or 17 points. Jelly that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably bright typical color" means that the color is characteristic of the juice ingredient(s) and that the jelly may be more than slightly cloudy and may have a slight dullness of color.

(c) *Substandard (SStd).* Jelly that is definitely off-color for any reason and fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1090 Flavor.

(a) *Grade A.* Jelly that has a distinct and normal flavor may be given a score of 36 to 40 points. "Distinct and normal flavor" means that the product has a good distinct flavor characteristic of the fruit or nonfruit ingredient(s) after preserving and is free from any caramelized flavor or any objectionable flavor of any kind.

(b) *Grade B.* Jelly that has a reasonably good and normal flavor may be given a score of 32 to 35 points. Jelly that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good and normal flavor" means that the product has a reasonably good flavor characteristic of the fruit or nonfruit ingredient(s) after preserving and may have a slightly caramelized flavor but is free from any bitter flavor or other objectionable flavor or off-flavor of any kind.

(c) *Substandard (SStd).* Jelly that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1091 Determining the grade of a lot.

The grade of a lot of jelly covered by these standards is determined by the procedures set forth in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (§§ 52.1 through 52.83).

§ 52.1092 Score sheet for fruit jelly.

Size and kind of container ....
Container code or marking ....
Label ....
Net weight (in ounces) ....
Vacuum reading (in inches) ....
Type ....
Kind ....
Soluble solids ....

Factors		Points	
Consistency	40	(A)	36-40
		(B)	[1] 32-35
		(SStd)	[1] 0-31
Color	20	(A)	18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Flavor	40	(A)	36-40
		(B)	[1] 32-35
		(SStd)	[1] 0-31
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Fruit Preserves (or Jams)

SOURCE: 18 FR 7984, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR

32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, TYPES, KINDS, AND GRADES

§ 52.1111 Identity.

"Fruit preserves or jams" means preserves or jams as defined in the Definitions and Standards of Identity for Preserves, Jams (21 CFR 1501.160) issued pursuant to the Federal Food, Drug, and Cosmetic Act. The solids content of the finished fruit preserves or jams shall be not less than 65 degrees Brix. No correction is made for water-insoluble solids.

[44 FR 69613, Dec. 4, 1979. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.1112 Types of fruit preserves (or jams).

(a) *Type I.* Fruit preserves (or jams) that are prepared from a single fruit (except apple) listed in Group I or Group II are "Type I."

(b) *Type II.* Fruit preserves (or jams) that are prepared from more than a single fruit listed in Group I and Group II are "Type II."[1]

§ 52.1113 Kinds of fruit preserves (or jams) according to Group I or Group II designations.

GROUP I

Any one singly or in combination with not more than four of the following:[1]

Blackberry (other than dewberry).
Black raspberry.
Blueberry.
Boysenberry.
Cherry.
Crabapple.
Dewberry (other than boysenberry, loganberry and youngberry).
Elderberry.
Grape.
Grapefruit.
Huckleberry.
Loganberry.
Orange.
Pineapple.
Raspberry, red raspberry.
Rhubarb.
Strawberry.
Tangerine.
Tomato.
Yellow tomato.
Youngberry.

GROUP II

Any one singly or in combination with not more than four of the following fruits and fruits in Group I:

Apple (type II only).
Apricot.
Cranberry.
Damson, damson plum.
Fig.
Gooseberry.
Greengage, greengage plum.
Guava.
Nectarine.
Peach (clingstone and freestone).
Pear.
Plum (other than greengage plum and damson plum).
Quince.
Red currant, currant (other than black currant).

§ 52.1114 Grades of fruit preserves (or jams).

(a) "U.S. Grade A" or "U.S. Grade A for Manufacturing" is the quality of fruit preserves or jams that have a good consistency; that have a good color; that are practically free from defects; that have a good flavor; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart: *Provided*, That no fruit preserve or jam shall be graded, inspected and/or certified as a manufacturing grade product unless it is suitably designated and/or labeled. Manufacturing grade product shall not be packaged in containers smaller than the equivalent of a number ten (No. 10) metal can (603 x 700).

(b) "U.S. Grade B" or "U.S. Choice" is the quality of fruit preserves (or jams) that possess a reasonably good consistency; that possess a reasonably good color; that are reasonably free from defects; that possess a fairly good flavor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of fruit preserves (or jams) that fail to meet the requirements of U.S. Grade B or U.S. Choice.

[18 FR 7984, Dec. 9, 1953. Redesignated at 42 FR 32514, June 27, 1977, and amended at

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[1] In accordance with the limits specified in the definitions and standards of identity for preserves, jams. (21 CFR 150.160)

44 FR 69614, Dec. 4, 1979. Redesignated at 46 FR 63203, Dec. 31, 1981]

FILL OF CONTAINER

§ 52.1115 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled with fruit preserves (or jams) as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the volume of the container.

FACTORS OF QUALITY

§ 52.1116 Ascertaining the grade.

(a) The grade of fruit preserves (or jams) is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of consistency, color, absence of defects, and flavor.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Consistency	20
Color	20
Absence of defects	20
Flavor	40
Total score	100

§ 52.1117 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1118 Consistency.

(a) *General.* The factor of consistency refers to the extent of the dispersion and size of the fruit or fruit particles throughout, and the gel-like properties of the product: *Provided,* That any requirements for wholeness of fruit are waived for products packaged in one and one-half (1½) ounce and smaller containers: *And further provided,* That, fruit puree as a single fruit ingredient may not be used.

(b) *A classification.* (1) Fruit preserves or jams that have a good consistency may be given a score of 17 to 20 points. "Good consistency" means that the fruit or fruit particles are dispersed uniformly throughout the product; that the product has a tender gel or may have no more than a very slight tendency to flow, except that a slightly less viscous consistency may be present when the fruit is chiefly in the form of whole or almost whole units; and that in the following kinds the product does not have a macerated or pureed appearance, and is made from whole or almost whole fruit as indicated:

(i) *Apricot.* Halves or pieces or combinations thereof.

(ii) *Cherry.* Whole or almost whole or pieces of pitted cherries or combinations thereof.

(iii) *Gooseberry.* Whole or almost whole berries or combinations thereof.

(iv) *Peach (clingstone and freestone).* Slices or pieces or combinations thereof.

(v) *Pineapple.* Crushed pieces or small pieces or combinations thereof.

(vi) *Strawberry.* Whole or almost whole berries or combinations thereof.

(2) Fruit preserves or jams for manufacturing that have a good consistency may be given a score of 17 to 20 points. "Good consistency" means that the product meets all of the requirements of (b)(1) of this section; *Provided,* That the product may have a moderate to very firm gel but may not be rubbery.

(c) *(B) classification.* If the fruit preserves (or jams) possess a reasonably good consistency, a score of 14 to 16 points may be given. Fruit preserves (or jams) that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good consistency" means that the fruit or fruit particles are dispersed reasonably uniformly throughout the product; and that the product may be firm but not rubbery or may be noticeably viscous but not excessively thin.

(d) *Substandard classification.* Fruit preserves or jams that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 7984, Dec. 9, 1953. Redesignated at 42 FR 32514 June 27, 1977, and amended at 44 FR 69614, Dec. 4, 1979. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.1119 Color.

(a) (*A*) *classification.* Fruit preserves (or jams) that possess a good color may be given a score of 17 to 20 points. "Good color" means that the color is bright, practically uniform throughout, and characteristic of the variety or varieties of the fruit ingredients; and that the product is free from dullness of color due to any cause (including, but not being limited to, oxidation or improper processing or improper cooling).

(b) (*B*) *classification.* If the fruit preserves (or jams) possess a reasonably good color, a score of 14 to 16 points may be given. Fruit preserves (or jams) that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the color is reasonably bright, reasonably uniform throughout, and characteristic of the variety or varieties of the fruit ingredients; however, the color may be slightly dull but may not be off color due to oxidation or improper processing or improper cooling or other causes.

(c) (*SStd*) *classification.* Fruit preserves (or jams) that for any reason fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1120 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom, in the applicable kinds, from substances ordinarily removed in the preparation for the manufacture of fruit preserves (or jams) and includes, but is not limited to, caps, leaves, stems, seeds, pits, peel, or any portions thereof; from blemished units, underdeveloped units, or otherwise damaged units; and from any defects not specifically mentioned that affect the appearance or edibility of the product.

(1) A "cluster of cap stems" means three or more joined cap stems.

(2) A "cap" means a loose or attached full cap or a portion of a cap to which at least one sepal-like bract or portion thereof is attached. A short stem that is attached to a cap is considered a part of that cap.

(3) A "short stem" means a stem that is ⅛ inch or less in length and which may include the center portion of a cap to which no sepal-like bract or portion thereof is attached. A short stem that is attached to a cap is considered a part of that cap.

(4) A "small stem" means a stem that is longer than ⅛ inch but not more than ¼ inch in length. A small stem that is attached to a cap is considered as a defect separate from that cap.

(5) A "medium stem" means a stem that is longer than ¼ inch but not more than ½ inch in length. A medium stem that is attached to a cap is considered as a defect separate from that cap.

(6) A "long stem" means a stem that is longer than ½ inch in length. A long stem that is attached to a cap is considered as a defect separate from that cap.

(7) A "woody base-stem" means any stem in grape preserves (or jams) with an enlarged woody base approximating 1/16 inch or more in diameter.

(8) "Peel" means, with respect to those fruits, such as apples and peaches, that are commonly prepared for the manufacture of fruit preserves (or jams) by the removal of the skin or peel, any skin or peel whether or not it is attached.

(9) "Seeds" means, with respect to those fruits, such as apples, grapes, and pears, that are prepared for the manufacture of fruit preserves (or jams) by the removal of the seeds, the seeds of such fruit. "Seeds" in fruit preserves (or jams) prepared from

citrus fruits means any seed or any portion thereof, whether or not fully developed, that measures more than 3/16 inch in any dimension. Seeds are not considered as defects in fruit preserves (or jams) prepared from such fruits as figs and tomatoes.

(10) "Pit" means, with respect to those fruits, such as apricots, cherries, plums, and peaches, that are prepared for the manufacture of fruit preserves (or jams) by the removal of the pits, a whole, intact pit. Portions of pits include:

(i) A "piece of pit" which means any portion of a pit that is more than ½ inch in any dimension;

(ii) A "small piece of pit" which means any portion of a pit that is not less than ¼ inch nor more than ½ inch in any dimension;

(iii) And a "pit fragment" which means any portion of a pit that is less than ¼ inch in any dimension.

(11) "Blemished, underdeveloped, or otherwise damaged" means units of fruit in which the appearance or edible quality is damaged or blemished because of discolored skin, bruised spots, dark particles, insect or similar injury, hard areas or units that are hard and shrivelled or damaged by mechanical, pathological or other injury.

(b) (*A*) *classification.* Fruit preserves (or jams) that are practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means with respect to:

(1) Type II and any kind or kinds with a macerated or pureed appearance (whether of Type I or II), that the defects do not materially affect the appearance or edibility of the product; and

(2) Type I, that the defects and defective units as applicable do not exceed the allowances for U.S. Grade A as specified in Tables I, II, III, or IV of this section and that any defects whether or not specifically mentioned in such tables do not materially affect the appearance or edibility of the product.

(c) (*B*) *classification.* If the fruit preserves (or jams) are reasonably free from defects, a score of 14 to 16 points may be given. Fruit preserves (or jams) that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means with respect to:

(1) Type II and any kind or kinds with a macerated or pureed appearance (whether of Type I or II), that the defects do not seriously affect the appearance or edibility of the product; and

(2) Type I, that the defects and defective units as applicable do not exceed the allowances for U.S. Grade B as specified in Tables I, II, III, or IV of this section and that any defects whether or not specifically mentioned in such tables do not seriously affect the appearance or edibility of the product.

(d) (*SStd*) *classification.* Fruit preserves (or jams) that fail to meet the requirements for paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

(e) *Allowances.* Ascertaining compliance with, and explanation of, allowances in Tables I, II, III, and IV:

TABLE I—MAXIMUM ALLOWANCES FOR DEFECTS

Kind of preserves (or jams) type I only	Grade and score range	Stems	Leaves	Caps or portions	Other extraneous material	Loose Sepal-like bracts	Seeds, pits, or portions thereof	Blemished, underdeveloped, or otherwise damaged
Blackberry Boysenberry Dewberry Loganberry Youngberry	U.S. Grade A (17-20 points).	Total of 1 only per 96 ounces				1 per 8 ounces	10 per 8 ounces in "seedless".	2 per 8 ounces.
	U.S. Grade B (14-16 points).	Total 1 only per 32 ounces				3 per 8 ounces	20 per 8 ounces in "seedless".	4 per 8 ounces.
Cherry	U.S. Grade A (17-20 points).	do					1 per 32 ounces	5 per 8 ounces.
	U.S. Grade B (14-16 points).	Total of 1 only per 16 ounces					do	8 per 8 ounces.
Blueberry Elderberry Huckleberry	U.S. Grade A (17-20 points).	Total of 1 large stem or 1 leaf per 8 ounces, and 1 cluster of cap stems per 8 ounces.						3 per 8 ounces.
	U.S. Grade B (14-16 points).	Total of 3 large stems or 3 leafs per 16 ounces, and 3 clusters of cap stems per 16 ounces.						5 per 8 ounces.

TABLE II—MAXIMUM ALLOWANCES FOR DEFECTS

Kind of preserves (or jams) type I only	Grade and score range	Stems				Leaves	Other extraneous material	Seeds, pits or portions			Peel	Blemished, underdeveloped or otherwise damaged
		Short (1/16" or less)	Small (over 1/16" to 1/4" inclusive)	Medium (over 1/4" to 1/2" inclusive)	Long (longer than 1/2")			Pit or pieces of pit	Small pieces of pit	Pit fragments		
	U.S. Grade A (17-20 points).	1 only per 16 ounces	1 only per 16 ounces	1 only per 16 ounces	None	1 only per 32 ounces	1 only per 200 ounces.	1 only per 200 ounces.	1 only per 128 ounces.	1 only per 32 ounces.	No limit	1 unit per 8 ounces.

TABLE II—MAXIMUM ALLOWANCES FOR DEFECTS—Continued

Kind of preserves (or jams) type I only	Grade and score range	Stems				Leaves	Other extraneous material	Seeds, pits or portions			Peel	Blemished, underdeveloped or otherwise damaged
		Short (1/8" or less)	Small (over 1/8" to 1/4" inclusive)	Medium (over 1/4" to 1/2" inclusive)	Long (longer than 1/2")			Pit or pieces of pit	Small pieces of pit	Pit fragments		
Peach Nectarine	U.S. Grade A (17-20 points).					1 only per 32 ounces.	1 only per 32 ounces.	1 only per 96 ounces.	do	do	1 square inch per 16 ounces.	2 units per 8 ounces.
	U.S. Grade B (14-16 points).					1 only per 16 ounces.	3 per 32 ounces.	1 only per 48 ounces.	1 only per 32 ounces.	1 only per 8 ounces.	1 square inch per 8 ounces.	8 units per 8 ounces.
Damson plum Green gage plum Plum (other)	U.S. Grade A (17-20 points).	Total of 1 per 8 ounces.	Total of 1 per 8 ounces.	Total of 1 per 8 ounces.	Total of 1 per 8 ounces.	Total of 1 per 8 ounces.	1 only per 128 ounces.	1 only per 32 ounces.	1 only per 32 ounces.	1 only per 32 ounces.	No limit	1 unit per 8 ounces.
	U.S. Grade B (14-16 points).	Total of 3 per 16 ounces.	Total of 3 per 16 ounces.	Total of 3 per 16 ounces.	Total of 3 per 16 ounces.	Total of 3 per 16 ounces.	1 only per 32 ounces.	1 only per 16 ounces.	1 only per 16 ounces.	1 only per 16 ounces.	do	2 units per 8 ounces.

TABLE III—MAXIMUM ALLOWANCES FOR DEFECTS

Kind of preserves (or jams) type I only	Grade and score range	Stems, Leaves	Other extraneous material	Loose sepal-like bracts	Seeds, pits, or portions thereof	Peel	Blemished, underdeveloped, or otherwise damaged
Cranberry Currant (other than black) Current, red Fig Gooseberry Rhubarb Tomato Tomato, yellow	U.S. Grade A (17-20 points).	Total of 1 per 32 ounces.	1 only per 200 ounces.	3 per 16 ounces		1 square inch per 16 ounces if prepared by peeling.	2 units per 8 ounces.
	U.S. Grade B (14-16 points).	do	1 only per 128 ounces.	5 per 16 ounces		1 square inch per 8 ounces if prepared by peeling.	4 units per 8 ounces.

Tangerine	U.S. Grade B (14-16 points).		1 only per 128 ounces.		1 per 8 ounces	5 units per 8 ounces.
Pineapple	U.S. Grade A (17-20 points).					2 units per 8 ounces.
	U.S. Grade B (14-16 points).					4 units per 8 ounces.

TABLE IV—MAXIMUM ALLOWANCES FOR DEFECTS

Kind of preserves (or jams) type I only	Grade and score range	Stems				Leaves	Caps or portions	Other extraneous material	Loose sepal-like bracts	Seeds	Blemished, underdeveloped or otherwise damaged
		Short (⅛" or less)	Small (over ⅛" to ¼" inclusive)	Medium (over ¼" to ½" inclusive)	Long (longer than ½")						
Grape	U.S. Grade A (17-20 points).	3 short or small thin stems, including only 1 woody base stem per 16 ounces.				1 only per 32 ounces.		1 only per 200 ounces.	3 per 16 ounces.	3 seeds per 8 ounces.	2 units per 8 ounces.
	U.S. Grade B (14-16 points).	3 short or small thin stems, including only 2 woody base stem per 8 ounces.				do		1 only per 128 ounces.	5 per 16 ounces.	6 seeds per 8 ounces.	4 units per 8 ounces.

TABLE IV—MAXIMUM ALLOWANCES FOR DEFECTS—Continued

Kind of preserves (or jams) type I only	Grade and score range	Stems				Leaves	Caps or portions	Other extraneous material	Loose sepal-like bracts	Seeds	Blemished, underdeveloped or otherwise damaged
		Short (⅛" or less)	Small (over ⅛" to ¼" inclusive)	Medium (over ¼" to ½" inclusive)	Long (longer than ½")						
Strawberry	U.S. Grade A (17-20 points).	4 per 8 ounces	2 small or medium or long stems, including only 1 long stem—			½ square inch if measurable by area					Do.
						or—1 piece harmless extraneous material such as weeds or grass per 32 ounces					
	U.S. Grade B (14-16 points).	8 per 8 ounces	4 small or medium or long stems, including only 1 long stem—			½ square inch if measurable by area					8 units per 8 ounces.
						or—1 piece harmless extraneous material such as weeds or grass per 32 ounces					
	U.S. Grade A (17-20 points).	4 per 8 ounces	2 small or medium or long stems, including only 1 long stem—			½ square inch if measurable by area					4 units per 8 ounces.
						or—1 piece harmless extraneous material such as weeds or grass per 32 ounces					

(1) The term "ounces" refers to "ounces of net weight" of any individual container, of the average net weight of all the containers, or of the aggregate net weight of all the containers comprising the sample as may be applicable. The allowances as stated may be interpolated into other equivalents for containers of other sizes or on an aggregate basis.

(2) When the unit of the allowance, such as "per 200 ounces", is greater than in individual containers, the net weight of all containers in the sample may be aggregated to arrive at the approximate quantity by which to determine compliance with the stated allowance. For example, in a lot consisting of approximate 8-oz. net weight containers and with defects permitted in "1 per 200 ounces", such defect would be permitted in a total of not less than twenty-five 8-oz. containers (approximately 200 ounces in the aggregate).

(3) An occasional defect may be permitted if all the containers in a sample in the aggregate constitute a net weight less than the unit of allowance provided such defect, singly or in combination with other defects, no more than slightly affects the appearance or edibility of the product.

§ 52.1121 Flavor.

(a) (*A*) *classification.* Fruit preserves (or jams) that possess a good flavor may be given a score of 34 to 40 points. "Good flavor" means:

(1) That the product possesses a good and distinct flavor; and

(2) That the flavor is characteristic of the applicable kind of fruit ingredient or applicable kinds of fruit ingredients.

(b) (*B*) *classification.* If the fruit preserves (or jams) possess a fairly good flavor, a score of 28 to 33 points may be given. Fruit preserves (or jams) that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means:

(1) That the product possesses a flavor reasonably characteristic of the applicable kind of fruit ingredient or applicable kinds of fruit ingredients; and

(2) May possess a slightly caramelized flavor but is free from any bitter flavor or other objectionable flavor or off flavor of any kind.

(c) (*SStd*) *classification.* Fruit preserves (or jams) that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1122 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1123 Score sheet for fruit preserves (or jams).

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (in ounces) ....
Vacuum (in inches) ....
Type ....
Kind or kinds ....
Soluble solids (percent by refractometer) ....

Factors		Score points	
Consistency	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Absence of defects.	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Flavor	40	(A)	34-40
		(B)	[1] 28-33
		(SStd.)	[1] 0-27
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Grapefruit[1]

SOURCE: 38 FR 29210, Oct. 23, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY AND GRADES

§ 52.1141 Identity.

"Canned Grapefruit" means the canned product prepared from clean, sound, and mature grapefruit (Citrus paradisi Macfadyen), as such product is defined in the standards of identity for canned grapefruit (21 CFR 145.145(a)) issued pursuant to the Federal Food, Drug and Cosmetic Act.

§ 52.1142 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned grapefruit that:

(1) Has an average drained weight of not less than 53 percent of the water capacity of the container, of which not less than 65 percent by weight of the drained grapefruit consists of whole or practically whole segments;

(2) Has a good color;

(3) Is practically free from defects;

(4) Has a good character;

(5) Has a good flavor and odor; and

(6) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of canned grapefruit that:

(1) Has an average drained weight of not less than 53 percent of the water capacity of the container, of which not less than 50 percent by weight of the drained grapefruit consists of whole or practically whole segments (sample average);

(2) Has reasonably good color;

(3) Is reasonably free from defects;

(4) Has a reasonably good character;

(5) Has a reasonably good flavor and odor; and

(6) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Broken" is the quality of canned grapefruit that:

(1) Has an average drained weight of not less than 53 percent of the water capacity of the container, of which less than 50 percent weight of the drained grapefruit consists of whole or practically whole segments (sample average);

(2) Has at least a reasonably good color;

(3) Is at least reasonably free from defects;

(4) Has at least a reasonably good character;

(5) Has at least a reasonably good flavor and odor; and

(6) Scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned grapefruit that fails to meet the requirements of U.S. Grade B and U.S. Broken.

LIQUID MEDIA AND BRIX MEASUREMENTS

§ 52.1143 Liquid media and Brix measurements.

(a) Brix measurement requirements for the liquid media in canned grapefruit are not incorporated in the grades of the finished product since syrup, or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The designation of liquid packing media and Brix measurements, where applicable, is as follows:

Designation	Brix measurements
Water	Not applicable.
Grapefruit juice	Not applicable.
Grapefruit juice and water	Not applicable.
Slightly sweetened water	12° or more, but less than 16°.
Slightly sweetened grapefruit juice.	12° or more, but less than 16°.
Sirup	16° or more, but less than 18°.
Grapefruit juice sirup	16° or more, but less than 18°.
Heavy sirup	18° or more.
Heavily sweetened grapefruit juice sirup.	18° or more.

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.

(b) The densities of the packing media, as listed in this section, are measured on the refractometer, expressed as percent by weight sucrose (degrees Brix) with correction for temperature to the equivalent at 20°C. (68°F.), but without correction for invert sugars or other substances. The degrees Brix of the packing media may be determined by other method which gives equivalent results.

(c) Brix determination is made on the packing media 15 days or more after the grapefruit is canned or on the blended homogenized slurry of the comminuted entire contents of the container if canned for less than 15 days.

FILL OF CONTAINER

§ 52.1144 Fill of container.

(a) The fill of container for canned grapefruit is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full as practicable with grapefruit without impairment of quality.

(b) Canned grapefruit shall also meet the fill of container requirements as set forth in the Regulations of Food and Drug Administration (21 CFR 145.145(c)).

DRAINED WEIGHTS

§ 52.1145 Minimum drained weights.

(a) *General.* The minimum drained weight requirements for the various container sizes are listed in Table I. The drained weight of the grapefruit is not less than 53 percent of the water capacity of the container.

(b) *Definitions.* (1) Sample average—average of all the drained weights of the sample containers representing a lot.

(2) X_d—means a specified minimum sample average drained weight.

(3) LL—lower limit for individual container drained weight.

(c) *Method for ascertaining drained weight.* The drained weight of canned grapefruit is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch (2.3 mm), ± 3 percent square openings) so as to distribute the product evenly over the sieve. Without shifting the product, incline the sieve at an angle of 17° to 20° to facilitate drainage and allow to drain for 2 minutes. The weight of drained grapefruit is the weight of the sieve and product less the weight of the dry sieve. A sieve 8 inches in diameter is used if the contents of the container is less than 3 pounds and a sieve 12 inches in diameter is used if the contents of the container is 3 pounds or more.

(d) *Compliance with drained weight requirements.* A lot of canned grapefruit is considered as meeting the minimum drained weight requirement when the following criteria are met:

(1) The sample average meets the specified minimum sample average drained weight (designated as "X_d" in Table I); and

(2) The number of containers which fail to the minimum drained weight for individual containers (designated as "LL" in Table I) does not exceed the applicable acceptance number specified in Table II.

TABLE I—MINIMUM DRAINED WEIGHTS

Container designation	X_d (ounces)	LL (ounces)
8Z (211 × 304)	4.60	4.25
No. 303 (303 × 406)	8.95	8.50
No. 3 Cyl. (404 × 700)	27.40	26.30

TABLE II—SINGLE SAMPLING PLANS AND ACCEPTANCE NUMBERS

Sample Size (No. of sample containers)	3	6	13	21	29	38	48	60
Acceptance numbers	0	1	2	3	4	5	6	7

[38 FR 29210, Oct. 23, 1973; 38 FR 29876, Oct. 30, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SAMPLE UNIT SIZE

§ 52.1146 Sample unit size.

Compliance with requirements for factors of quality is based on a sample unit comprised of the entire contents of one container, irrespective of container size.

[38 FR 29210, Oct. 23, 1973; 38 FR 29876 Oct. 30, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

FACTORS OF QUALITY

§ 52.1147 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of canned grapefruit is ascertained by considering the factor of flavor and odor which is not scored; the ratings for the factors of wholeness, color, defects, and character which are scored; the total score; and the limiting rules which may be applicable.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor are:

Factors	Points
Wholeness	25
Color	25
Defects	25
Character	25
Total	100

(c) *Definition.* (1) "Good flavor and odor" means that the product has a distinct and normal flavor and odor typical of canned grapefruit and is free from objectionable flavors and objectionable odors of any kind.

(2) "Reasonably good flavor and odor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.1148 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "23 to 25 points" means 23, 24, or 25 points).

§ 52.1149 Wholeness.

(a) *General.* (1) A "whole segment" means any grapefruit segment that is substantially intact and retains its apparent original conformation.

(2) A "practically whole segment" means any portion of a grapefruit segment that is not less than 75 percent of its apparent original size and is not excessively trimmed.

(b) (*A*) *classification.* Sample units of canned grapefruit that consist of not less than 65 percent by weight of the drained grapefruit in whole and/or practically whole segments may be given a score of 21 to 25 points.

(c) (*B*) *classification.* Sample units of canned grapefruit that consist of less than 65 percent but not less than 40 percent by weight of the drained grapefruit in whole and/or practically whole segments may be given a score of 17 to 20 points. In addition the sample average (average of all sample units representing a lot) shall not be less than 50 percent by weight of whole and/or practically whole segments. Sample units of canned grapefruit that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.)

(d) (*Broken*) *classification.* Sample units of canned grapefruit that individually consist of less than 40 percent by weight of the drained grapefruit in whole and/or practically whole segments, or average (average of all sample units) is less than 50 percent by weight of the drained grapefruit in whole and/or practically whole segments may be given a score of 0 to 16 points. Sample units of canned grapefruit that fall into this classification shall not be graded above U.S. Broken, regardless of the total score for the product. (This is a limiting rule.)

§ 52.1150 Color.

(a) (*A*) *classification.* Canned grapefruit that has a good color may be given a score of 23 to 25 points. "Good color" means a practically uniform, bright, typical color free from any noticeable tinge of amber.

(b) (*B*) *classification.* Canned grapefruit that has a reasonably good color may be given a score of 21 or 22 points.

Canned grapefruit that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.) "Reasonably good color" means a fairly bright color which may be variable but is not off-color for any reason.

(c) (*SStd*) *classification.* Canned grapefruit that fails to meet the requirements in paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

§ 52.1151 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from extraneous vegetable material, from seeds, from portions of albedo, from portions of tough membrane, from damaged units, and from other similar defects.

(1) "Extraneous vegetable material" means leaves, portions of leaves, small pieces of peel, and other similar material that is harmless.

(2) "Seed" means any seed or any portion thereof, whether or not fully developed, that measures more than 3/16 inch in any dimension.

(3) "Large seed" means any seed or any portion thereof, whether or not fully developed, that measures more than 3/8 inch in any dimension.

(4) "Damaged unit" means any grapefruit segment or portion thereof that is damaged by lye peeling, by discoloration, or by similar injury or that is otherwise damaged to such an extent that the appearance or eating quality of the unit is materially affected.

(b) (*A*) *classification.* Canned grapefruit that is practically free from defects may be given a score of 23 to 25 points. "Practically free from defects" means that:

(1) All defects present, whether or not specifically defined or listed in this section, do not more than slightly affect the appearance or edibility of the product; and

(2) The defects that may be present in a sample unit and in the entire sample do not exceed the allowances specified in Table III.

(c) (*B*) *classification.* Canned grapefruit that is reasonably free from defects may be given a score of 21 to 22 points. Canned grapefruit that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.) "Reasonably free from defects" means that:

(1) All defects present, whether or not specifically defined or listed in this section, may materially, but not seriously, affect the appearance or eligibility of the product; and

(2) The defects that may be present in a sample unit and in the entire sample do not exceed the allowances specified in Table IV.

(d) (*SStd.*) *classification.* Canned grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

TABLE III—MAXIMUM ALLOWANCES FOR DEFECTS IN CANNED GRAPEFRUIT

[U.S. GRADE A]

Defects	8Z (211 × 304)		No. 303 (303 × 406)		No. 3 Cyl. (404 × 700)	
	Sample unit	Sample average	Sample unit	Sample average	Sample unit	Sample average
Extraneous vegetable material.	1 Piece	0.25 Piece	1 Piece	0.50 Piece	1 Piece	0.75 Piece.
Seeds and large seeds.	Total of 3 seeds including not more than 1 large seed.	1.6 seeds including not more than 0.4 large seed.	Total of 4 seeds including not more than 2 large seeds.	3.2 seeds including not more than 0.8 large seed.	Total of 10 seeds including not more than 3 large seeds.	
Albedo and tough membrane.	1 Square inch	½ Square inch	2 Square inches.	1 Square inch	5 Square inches.	4 Square inches.
Damaged units	¼ ounce		½ ounce		1½ ounces	

TABLE III—MAXIMUM ALLOWANCES FOR DEFECTS IN CANNED GRAPEFRUIT—Continued

[U.S. GRADE A]

Defects	8Z (211 × 304)		No. 303 (303 × 406)		No. 3 Cyl. (404 × 700)	
	Sample unit	Sample average	Sample unit	Sample average	Sample unit	Sample average
Total—all defects specified above and/or any other defects that may be present.	(1)	(1)	(1)	(1)	(1)	(1).

[1] Cumulative Effect—Does not More Than Slightly Affect the Appearance or Eating Quality of the Product.

TABLE IV—MAXIMUM ALLOWANCES FOR DEFECTS IN CANNED GRAPEFRUIT

[U.S. GRADE B]

Defects	8Z (211 × 304)		No. 303 (303 × 406)		No. 3 Cyl. (404 × 700)	
	Sample unit	Sample average	Sample unit	Sample average	Sample unit	Sample average
Extraneous vegetable material.	2 Pieces	0.50 Piece	2 Pieces	0.75 Piece	2 Pieces	1 Piece.
Seeds and large seeds.	Total of 6 seeds including not more than 2 large seeds.	4.8 seeds including not more than 1.2 large seeds.	Total of 12 seeds including not more than 3 large seeds.	9.6 seeds including not more than 2.4 large seeds.	Total of 20 seeds including not more than 5 large seeds.	
Albedo and tough membrane.	1½ square inches.	¾ square inch	3 square inches.	2 square inches.	7½ square inches.	6 square inches.
Damaged units	¾ ounce		1½ ounces		4 ounces	
Total—All defects specified above and/or any other defects that may be present.	(1)	(1)	(1)	(1)	(1)	(1).

[1] Cumulative Effect—May Materially, but not Seriously, Affect the Appearance or Eating Quality of the Product.

§ 52.1152 Character.

(a) *General.* The factor of character refers to the structure and condition of the cells of the grapefruit and reflects the maturity of the grapefruit.

(b) (*A*) *classification.* Canned grapefruit that has a good character may be given a score of 23 to 25 points. "Good character" means that the grapefruit segments are moderately firm and fleshy; that the segments or portions thereof possess a juicy, cellular structure free from dry cells, or "ricey" cells, or fibrous cells that materially affects the appearance or eating quality of the product.

(c) (*B*) *classification.* Canned grapefruit that has a reasonably good character may be given a score of 21 or 22 points. Canned grapefruit that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.) "Reasonably good character" means that the grapefruit segments may be affected, but not seriously so, by dry cells, "ricey" cells or fibrous cells that detract from the appearance or eating quality of the product.

(d) (*SStd.*) *classification.* Canned grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

LOT INSPECTION AND CERTIFICATION

§ 52.1153 Ascertaining the grade of a lot.

The grade of a lot of canned grapefruit covered by these standards is determined by the procedures set forth in the Regulation Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.1154 Score sheet for canned grapefruit.

Size and kind of container
Container mark or identification
Label
Net weight (ounces)
Vacuum (inches)
Drained weight (ounces)
Brix measurement
Syrup designation

Factors		Score points	
Wholeness	25	(A)	21-25
		(B)	[1]17-20
		(Broken)	[1]0-16
Color	25	(A)	23-25
		(B)	[1]21-22
		(Broken)	[1]21-25
		(SStd.)	[1]0-20
Defects	25	(A)	23-25
		(B)	[1]21-22
		(Broken)	[1]21-25
		(SStd.)	[1]0-20
Character	25	(A)	23-25
		(B)	[1]21-22
		(Broken)	[1]21-25
		(SStd.)	[1]0-20
Total score	100		
Flavor and odor		Good; reasonably good	
Grade			

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Grapefruit

SOURCE: 18 FR 7989, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.1171 Product description.

Frozen grapefruit is prepared from the matured fruit of the grapefruit tree (Citrus paradisi), after the fruit has been washed and peeled, and has been separated into segments by removing the core, seeds, and membrane; may be packed with or without packing media; and is frozen and stored at temperatures necessary for the preservation of the product.

§ 52.1172 Grades of frozen grapefruit.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen grapefruit of which not less than 75 percent by weight of the grapefruit consists of segments that are whole or almost whole; that possesses a practically uniform, bright, typical color; that is practically free from defects; that possesses a good character; that possesses a normal flavor and odor; and scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen grapefruit of which not less than 50 percent by weight of the grapefruit consists of segments that are whole or almost whole; that possesses a reasonably uniform and reasonably good color; that is reasonably free from defects; that possesses a reasonably good character; that possesses a normal flavor and odor; and scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Broken" is the quality of frozen grapefruit of which less than 50 percent by weight of the grapefruit consists of segments that are whole or almost whole; that possesses a reasonably uniform and reasonably good color; that is reasonably free from defects; that possesses a reasonably good character; that possesses a normal flavor and odor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U.S. Grade D" or "Substandard" is the quality of frozen grapefruit that fails to meet the requirements of U.S. Grade B or U.S. Choice and U.S. Broken.

FACTORS OF QUALITY

§ 52.1173 Ascertaining the grade.

(a) The grade of frozen grapefruit is determined immediately after thawing to the extent that the units may be separated easily. Such grade may be ascertained by considering, in addition to the requirements of the respective grade, the following factors: Wholeness, color, absence of defects, and character.

(b) The relative importance of each factor has been expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Wholeness	20
Color	20
Absence of defects	30
Character	30
Total score	100

(c) "Normal flavor and odor" means that the grapefruit is free from objectionable flavors, off flavors, and objectionable odors of any kind.

§ 52.1174 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1175 Wholeness.

(a) *Definitions.* (1) "Whole" or "whole segment" means any segment that retains its apparent original conformation, is not excessively trimmed, and weighs not less than ⅜ ounce. A whole segment that is excessively trimmed or that weighs less than ⅜ ounce is considered a broken segment.

(2) "Almost whole" or "almost whole segment" means any portion of a segment that is not less than 75 percent of the apparent original segment size, is not excessively trimmed, and weighs not less than ⅜ ounce. An almost whole segment that is excessively trimmed or that weighs less than ⅜ ounce is considered a broken segment.

(3) "Broken" or "broken segment" means a portion of a segment that is less than 75 percent of the apparent original segment size, a whole or almost whole segment that is excessively trimmed, a whole or almost whole segment that weighs less than ⅜ ounce, and portions of segments that are joined together only by a "thread" or membrane.

(b) (*A*) *classification.* Frozen grapefruit that consists of not less than 75 percent by weight of units that are whole or almost whole segments may be given a score of 18 to 20 points.

(c) (*B*) *classification.* If the frozen grapefruit consists of at least 50 percent but less than 75 percent by weight of units that are whole or almost whole segments, a score of 16 or 17 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule).

(d) (*Broken*) *classification.* If the frozen grapefruit consists of less than 50 percent by weight of the units that are whole or almost whole segments, a score of 0 to 15 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U.S. Broken, regardless of the total score for the product (this is a limiting rule).

(e) *General.* The evaluation of the score points for the factor of wholeness may be determined from Table No. I of this paragraph which indicates the score range in the respective grades and denotes the minimum requirement for whole or almost whole segments and the maximum allowances for broken segments for the score indicated.

TABLE NO. I

Grade	Score points	Whole or almost whole segments (minimum (by weight)) (percent)	Broken segments (maximum (by weight)) (percent)
U.S. Grade A or U.S. Fancy	20	100	0
	19	85	15
	18	75	25
U.S. Grade B or U.S. Choice	17	60	40
U.S. Choice	16	50	50
	15	45	55
	14	40	60
	13	35	65
	12	30	70
	11	25	75
	10	20	80
	9	15	85
	8	10	90
U.S. Broken	7	5	95

TABLE NO. I—Continued

Grade	Score points	Whole or almost whole segments (minimum (by weight)) (percent)	Broken segments (maximum (by weight)) (percent)
	6	0	(1)
	5	0	(1)
	4	0	(1)
	3	0	(1)
	2	0	(1)
	1	0	(1)
	0	0	(1)

[1] Large to small: 100% and depending on size of broken units.

§ 52.1176 Color.

(a) *General.* Federal inspection certificates may designate pink grapefruit whenever that fact is determined.

(1) The uniformity and intensity of the typical color is considered in determining the factor of color.

(b) (*A*) *classification.* Frozen grapefruit that possesses a practically uniform, bright, typical color may be given a score of 18 to 20 points. "Practically uniform, bright, typical color" means that the grapefruit may possess not more than a slight variation from the typical color of properly matured grapefruit or pink grapefruit from which prepared.

(c) (*B*) *classification.* If the frozen grapefruit possesses a reasonably uniform and reasonably good color, a score of 16 or 17 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably uniform and reasonably good color" means that the grapefruit may be variable in color, is fairly bright, and is not off color.

(d) (*SStd*) *classification.* Frozen grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 15 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1177 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material, from seeds, from portions of covering membrane, and from damaged units.

(1) "Harmless extraneous material" means leaves, small pieces of peel, and other similar material.

(2) "Seed" means any seed, whether or not fully developed, that measures more than 3/16 inch in any dimension. A "large seed" is one that may be plump and measures more than 3/8 inch in any dimension.

(3) "Damaged unit" means any unit that is damaged by pathological injury by lye peeling, by discoloration, or by similar injury or that is damaged to such an extent that the appearance of eating quality of the unit is seriously affected.

(b) (*A*) *classification.* Frozen grapefruit that is practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that no harmless extraneous material is present; that not more than 5 percent by weight of the grapefruit may be damaged units; and that for each 16 ounces of net weight there may be present:

(1) Not more than 6 seeds including not more than 1 large seed; and

(2) Not more than an aggregate area of 1 square inch on the units covered by membrane.

(c) (*B*) *classification.* If the frozen grapefruit is reasonably free from defects, a score of 24 to 26 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that not more than 10 percent by weight of the grapefruit may be damaged units; and that for each 16 ounces of net weight there may be present:

(1) Not more than 1 small piece of harmless extraneous material;

(2) Not more than 12 seeds including not more than 3 large seeds; and

(3) Not more than an aggregate area of 2 square inches on the units covered by membrane.

(d) (*SStd*) *classification.* Frozen grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

(e) *General.* The evaluation of the score points for the factor of absence of defects may be determined from Table No. II of this paragraph which indicates the maximum allowances for each type of defect for the score indicated.

TABLE NO. II

Grade and score points	Harmless extraneous material (per 16 ounces)	Percent damaged units (by weight)	Seeds (per 16 ounces)	Aggregate area covered by membrane (per 16 ounces)
	Maximum			
U.S. Grade A or U.S. Fancy:				
30	None	1	None	None.
29	None	2	2, but no large seeds	½ square inch.
28	None	3	4, but no large seeds	¾ square inch.
27	None	5	6, including 1 large seed	1 square inch.
U.S. Grade B or U.S. Choice and Broken:				
26	1 small piece	7	8, including 1 large seed	1½ square inches.
25	1 small piece	9	10, including 2 large seeds	1 ¾ square inches.
24	1 small piece	10	12, including 3 large seeds	2 square inches.
U.S. Grade D or Substandard:				
23 or less	([1])	([1])	([1])	([1])

[1] More than allowances permitted for 24 points.

§ 52.1178 Character.

(a) *General.* The factor of character refers to the structure and condition of the cells and reflects the maturity of the grapefruit.

(b) (*A*) *classification.* Frozen grapefruit that possesses a good character may be given a score of 27 to 30 points. "Good character" means that the grapefruit is moderately firm and fleshy; that the segments possess a well-developed, juicy, cellular structure; that the product is fairly free from loose cell sacs; and that not more than 5 percent by weight of the grapefruit consists of soft, fibrous, or "ricey" segments.

(c) (*B*) *classification.* If the frozen grapefruit possesses a reasonably good character, a score of 24 to 26 points may be given. Frozen grapefruit that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the grapefruit is fairly firm and fleshy and that not more than 15 percent by weight of the grapefruit consists of soft, fibrous, or "ricey" segments.

(d) (*SStd*) *classification.* Frozen grapefruit that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1179 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1180 Score sheet for frozen grapefruit.

Size and kind of container ....

Container code or marking ....

Label (style of pack: ratio of fruit-sugar, etc., if shown) ....

Net weight ....

Color (if "pink" varieties) ....

Factors		Score points	
Wholeness	20	(A)	18–20
		(B)	[1] 16–17
		(Bkn)	[1] 0–15
Color	20	(A)	18–20
		(B)	[1] 16–17
		(D)	[1] 0–15
Absence of defects.	30	(A)	27–30
		(B)	[1] 24–26
		(D)	[1] 0–23
Character	30	(A)	27–30
		(B)	[1] 24–26
		(D)	[1] 0–23
Total score	100		

Normal flavor and odor ....

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Grapefruit Juice

SOURCE: 48 FR 40876, Sept. 12, 1983, unless otherwise noted.

§ 52.1221 Product description.

(a) "Grapefruit juice" is the product represented as defined in the Standards of Identity for Grapefruit Juice (21 CFR 146.132), issued under the Federal Food, Drug, and Cosmetic Act.

(b) "Grapefruit juice from concentrate" is the product represented as defined in the Standards of Identity for Grapefruit Juice (21 CFR 146.132), issued under the Federal Food, Drug, and Cosmetic Act.

(c) "Frozen concentrated grapefruit juice" is processed by concentrating and preserving by freezing the product represented as defined in the Standards of Identity for Grapefruit Juice (21 CFR 146.132), issued under the Federal Food, Drug, and Cosmetic Act.

(d) "Concentrated grapefruit juice for manufacturing" is processed by concentrating and preserving by physical means the product represented as defined in the Standards of Identity for Grapefruit Juice (21 CFR 146.132), issued under the Federal Food, Drug, and Cosmetic Act. The finished product may not contain any additives except cold-pressed oil, to standardize flavor, and chemical preservatives permissible under provisions of the Federal Food, Drug and Cosmetic Act.

(e) "Dehydrated grapefruit juice" is processed by concentrating and preserving by dehydration the product represented as defined in the Standards of Identity for Grapefruit Juice (21 CFR 146.132), issued under the Federal Food, Drug, and Cosmetic Act.

§ 52.1222 Styles.

(a) Unsweetened.

(b) Sweetened (Sweetener added).

§ 52.1223 Color.

(a) White or amber.

(b) Pink or red.

§ 52.1224 Definitions of terms.

In these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Acid* means the percent, by weight, of total acidity (calculated as anhydrous citric acid).

(b) *Appearance* means the physical properties of grapefruit juice which are evaluated by the human eye.

(c) *Brix* means the total soluble solids as determined when tested with a Brix hydrometer and applying the applicable temperature correction. The Brix may be determined by any other method that gives equivalent results.

(d) *Brix/Acid Ratio* means the ratio of the degrees Brix of the juice to the grams of anhydrous citric acid per 100 grams of the juice.

(e) *Brix value* means the refractometric sucrose value determined in accordance with the "International Scale of Refractive Indices of Sucrose Solutions" and to which the applicable correction for acid is added. The Brix value is determined in accordance with the refractometric method outlined in the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(f) *Brix value/Acid Ratio* means the ratio of the Brix value of the concentrate, in degrees Brix, to the grams of anhydrous citric acid per 100 grams of concentrate.

(g) *Coagulation* means curdling of grapefruit juice.

(h) *Color.*—

(1) *Good color* means the color of grapefruit juice which is representative of juice expressed from mature, well-ripened grapefruit; and the grapefruit juice may show fading and lack of luster.

(2) *Reasonably good color* means the color of grapefruit juice which may be slightly, but not materially, affected by scorching, oxidation, or caramelization.

(i) *Defects* refer to juice cells, seeds or portion of seeds, specks, particles of membrane, core, peel, or any other distinctive features that adversely affect the appearance or drinking quality of grapefruit juice.

(1) *Practically free from defects* means defects in excess of that normally expected in grapefruit juice are not present.

(2) *Reasonably free from defects* means the presence of defects does not seriously affect the appearance or drinking quality of grapefruit juice.

(j) *Flavor.*—(1) *Good flavor* means flavor of:

(i) *Grapefruit juice* that is typical of freshly extracted juice from mature, well-ripened grapefruit. The grapefruit juice may be slightly affected by processing, packaging, or storage conditions.

(ii) *Grapefruit juice from concentrate* that is typical of juice from mature, well-ripened grapefruit. The grapefruit juice may be slightly affected by processing, packaging, or storage conditions.

(iii) *Frozen concentrated grapefruit juice* that is typical of freshly extracted juice from mature, well-ripened grapefruit; and does not have more than a slight trace of bitterness.

(iv) *Concentrated grapefruit juice for manufacturing* that is practically free from traces of scorching, caramelization, oxidation, and terpene.

(v) *Dehydrated grapefruit juice* that is free from terpene, caramelization, oxidation, and rancid flavors.

(2) *Reasonably good flavor* means flavor of:

(i) *Grapefruit juice* that is materially but not seriously affected by bitterness, terpene, processing, storage, or container flavors.

(ii) *Grapefruit juice from concentrate* that is materially but not seriously affected by bitterness, terpene, processing, storage, or container flavors.

(iii) *Frozen concentrated grapefruit juice* that is fairly typical of freshly extracted grapefruit juice, no more than slightly affected by bitterness, and is free from abnormal flavors of any kind.

(iv) *Concentrated grapefruit juice for manufacturing* that is no more than slightly affected by scorching, caramelization, or oxidation. It may have a trace of terpene, but is free from any other abnormal flavors.

(v) *Dehydrated grapefruit juice* that is no more than slightly affected by scorching, caramelization, oxidation, or terpene flavors, but is free from any other abnormal flavors.

(k) *Free and suspended pulp* means the particles of membrane, core, peel, and similar particles that settle upon centrifuging a sample unit from which the floating fruit cells and floating pulp have been removed.

(l) *Reconstituted juice* means the product obtained by thoroughly mixing the concentrate with the amount of water prescribed on the label or other appropriate directions.

(m) *Reconstitutes properly* means, that upon mixing with water, the concentrate dissolves readily and has no material coagulation or separation.

(n) *Recoverable oil* means the volume of oil that may be recovered from grapefruit juice as determined by the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(o) *Sample unit* means a portion of grapefruit juice used for grading.

(p) *Terpene* means a specific flavor found in oils and resins.

§ 52.1225 Recommended sample unit size.

The requirements for all factors of quality and analysis are based on the following:

(a) The entire contents of a container;

(b) A representative portion of the contents of a container;

(c) A combination of the contents of two or more containers; or

(d) A portion of unpacked product.

§ 52.1226 Grades.

(a) *U.S. Grade A* is the quality of the grapefruit juice that meets the applicable requirements of Tables I through V.

(b) *U.S. Grade B* is the quality of grapefruit juice that meets the applicable requirements of Tables I through V.

(c) *Substandard* is the quality of grapefruit juice that fails to meet the requirements for "U S. Grade B."

§ 52.1227 Factors of quality and analysis.

The grade for a lot of product is based on observation and analysis of grapefruit juice and reconstituted grapefruit juice for the following quality and analytical factors:

(a) *Quality:*

(1) Appearance;

(2) Coagulation;

(3) Color;

(4) Defects;

(5) Flavor; and

(6) Reconstitution.

(b) *Analytical:*

(1) Brix measurement or Brix value measurement;

(2) Brix/acid ratio or Brix value/acid ratio;

(3) Free and suspended pulp; and

(4) Recoverable oil.

§ 52.1228 Requirements for grades.

TABLE I—GRAPEFRUIT JUICE

Factors	Grade A	Grade B
Quality:		
Appearance	Fresh grapefruit juice	Fresh grapefruit juice
Coagulation	None	Slight
Color	Good	Reasonably good
Score Points	18–20	16–17
Defects	Practically free	Reasonably free
Score Points	18–20	16–17
Flavor	Good	Reasonably good
Score Points	54–60	48–53

	Unsweetened	Sweetened	Unsweetened	Sweetened
Analytical:				
Brix: Minimum	9.0°	11.5°	9.0°	11.5°
Brix/Acid Ratio:				
Minimum	8.0:1	9.0:1	7.0:1	9.0:1
Maximum	14.0:1	14.0:1	None	None
Free and suspended pulp (percent by volume): Maximum	10		15	
Recoverable oil (percent by volume): Maximum	0.020		0.025	

TABLE II—GRAPEFRUIT JUICE FROM CONCENTRATE

Factors	Grade A	Grade B
Quality:		
Appearance	Fresh grapefruit juice	Fresh grapefruit juice
Coagulation	None	Slight
Color	Good	Reasonably good
Score Points	18–20	16–17
Defects	Practically free	Reasonably free

TABLE II—GRAPEFRUIT JUICE FROM CONCENTRATE—Continued

Factors	Grade A	Grade B
Score Points	18–20	16–17.
Flavor	Good	Reasonably good.
Score Points	54–60	48–53.

	Unsweetened		Sweetened	Unsweetened		Sweetened
Analytical:						
Brix: Minimum	10.0°		11.5°	10.0°		11.5°
Soluble grapefruit solids, exclusive of sweeteners (percent by weight): Minimum			10.0			10.0
Brix/Acid Ratio:						
Minimum	8.0:1		9.0:1	7.0:1		9.0:1
Maximum	14.0:1		14.0:1	None		None
Free and suspended pulp (percent by volume): Maximum		10			15	
Recoverable oil (percent by volume): Maximum		0.020			0.025	

TABLE III—FROZEN CONCENTRATED GRAPEFRUIT JUICE

Factors	Grade A	Grade B
Quality: [1]		
Appearance	Fresh grapefruit juice	Fresh grapefruit juice.
Color	Good	Reasonably good.
Score Points	18–20	16–17
Defects	Practically free	Reasonably free.
Score Points	18–20	16–17
Flavor	Good	Reasonably good
Score Points	54–60	48–53
Reconstitution	Reconstitutes properly	Reconstitutes properly.

1 Reconstituted prior to grading.

	Unsweetened		Sweetened	Unsweetened		Sweetened
Analytical:						
Concentrate:						
Brix value: Minimum	38.0°		38.0°	38.0°		38.0°
Brix value/Acid Ratio:						
Minimum	9.0:1		10.0:1	7.0:1		8.0:1
Maximum	14.0:1		13.0:1	16.0:1		13.0:1
Reconstituted Juice:						
Brix: Minimum	10.6°			10.6°		
Minimum soluble grapefruit solids, exclusive of sweeteners (percent by weight)			10.6			10.6
Free and suspended pulp (percent by volume): Maximum			10			15
Recoverable oil (percent by volume): Maximum		0.020			0.025	
Seeds and portions of seeds that:						
Pass through round perforations 3.2 mm (0.125 in)		No more than slightly detract.			No more than materially detract.	
Fail to pass through round perforations 3.2 mm (0.125 in)				Practically none.		

1 Reconstituted prior to grading.

TABLE IV—CONCENTRATED GRAPEFRUIT JUICE FOR MANUFACTURING

Factors	Grade A	Grade B
Quality: [1]		
Color	Good	Reasonably good.
Score Points	18–20	16–17
Defects	Practically free	Reasonably free.
Score Points	18–20	16–17
Flavor	Good	Reasonably good.
Score Points	54–60	48–53
Reconstitution	Reconstitutes properly.	
Analytical: Brix value/Acid Ratio: Minimum	6.0:1	5.5:1
Free and suspended pulp (percent by volume-reconstituted juice): [1] Maximum.	10	12
Seeds and portions of seeds that: [1] Pass through round perforations 3.2 mm (0.125 in).	No more than slightly detract.	No more than materially detract.
Fail to pass through round perforations—3.2 mm (0.125 in)	Practically none.	

[1] Reconstituted prior to grading.

TABLE V—DEHYDRATED GRAPEFRUIT JUICE [1]

Factors	Grade A	Grade B
Quality:		
Appearance	Fresh grapefruit juice	Fresh grapefruit juice.
Color	Good	Reasonably good.
Score Points	18–20	16–17
Defects	Practically free	Reasonably free.
Score Points	18–20	16–17
Flavor	Good	Reasonably good.
Score Points	54–60	48–53
Reconstitution	Reconstitutes properly.	

	Unsweetened	Sweetened	Unsweetened	Sweetened
Analytical:				
Brix: Minimum	10.0°	11.5°	10.0°	11.5°
Brix/Acid Ratio:				
Minimum	8.0:1	9.0:1	7.0:1	9.0:1
Maximum	14.0:1	14.0:1	None	None
Recoverable oil (percent by volume): Maximum	0.020		0.025	

[1] Reconstituted prior to grading.

§ 52.1229 Sample size.

The sample size to determine acceptance with the requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

§ 52.1230 Lot requirements.

A lot of grapefruit juice is considered as meeting the requirements for quality if:

(a) The requirements specified in Tables I, II, III, IV, and V, as applicable, are met; and

(b) The sampling plans and procedures in 7 CFR 52.1 through 52.83 are met.

Subpart—United States Standards for Grades of Canned Grapefruit and Orange for Salad

SOURCE: 40 FR 15897, Apr. 8, 1975, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981. Further redesignated at 49 FR 1334, Jan. 11, 1984.

§ 52.1251 Product description.

Canned grapefruit and orange for salad, commonly known as canned citrus salad, is prepared from sound, mature grapefruit (Citrus paradisi Macfadyen) and sound, mature oranges of the orange group (Citrus sinensis). The fruit ingredients have been properly washed, cored, with seeds and major portions of tough membrane removed. The grapefruit units are segmented and the orange units may be segmented or sliced. The product is packed with a suitable packing medium which may be water, fruit juice, nutritive carbohydrate sweeteners, artificial sweeteners, or any other safe and suitable ingredients permissible under the Federal Food, Drug, and Cosmetic Act. The product is sufficiently processed by heat to assure preservation in hermetically or aseptically sealed containers.

[49 FR 1334, Jan. 11, 1984]

§ 52.1252 Styles.

(a) Segmented.

(b) Mixed segmented and sliced.

[49 FR 1334, Jan. 11, 1984]

§ 52.1253 Grades.

(a) "U.S. Grade A" is the quality of canned grapefruit and orange for salad that:

(1) Has a drained weight of orange fruit that is not less than 37½ percent nor more than 60 percent of the drained weight of the product;

(2) Has an average drained weight of not less than 53 percent of the water capacity of the container, of which not less than 65 percent by weight of each fruit ingredient consists of practically whole units;

(3) Has a good color;

(4) Is practically free from defects;

(5) Has a good character;

(6) Has a good flavor and odor; and

(7) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" is the quality of canned grapefruit and orange for salad that:

(1) Has a drained weight of orange fruit that is not less than 32½ percent nor more than 60 percent of the drained weight of the product;

(2) Has an average drained weight of not less than 53 percent of the water capacity of the container, of which not less than 50 percent by weight of each fruit ingredient consists of practically whole units;

(3) Has a reasonably good color;

(4) Is reasonably free from defects;

(5) Has a reasonably good character;

(6) Has a reasonably good flavor and odor; and

(7) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Broken" is the quality of canned grapefruit and orange for salad that:

(1) Has a drained weight of orange fruit that is not less than 32½ percent nor more than 60 percent of the drained weight of the product;

(2) Has an average drained weight of not less than 53 percent of the water capacity of the container, of which less than 50 percent of the drained weight of either fruit ingredient consists of practically whole units;

(3) Has a reasonably good color;

(4) Is reasonably free from defects;

(5) Has a reasonably good character;

(6) Has a reasonably good flavor and odor; and

(7) Scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned grapefruit and orange for salad that fails to meet the requirements of U.S. Grade B and U.S. Broken.

[40 FR 15897, Apr. 8, 1975. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981. Further redesignated and amended at 49 FR 1334, Jan. 11, 1984]

§ 52.1254 Liquid media and Brix measurements.

(a) Brix requirements for liquid media in canned grapefruit and orange for salad are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. It is recommended that the product, when packed in sirup, meet the following Brix measurements, as applicable, for the respective designation:

Designations	Brix measurement
"Heavy sirup"	18° or more.
"Light sirup"	16° or more, but less than 18°.
"Slightly sweetened water".	12° or more, but less than 16°.

(b) These recommendations are not applicable to the canned product packed in water, orange juice, fruit juice, or with artificial sweeteners.

(c) The densities of the packing media, as listed in this section, are measured on the refractometer, expressed as percent by weight sucrose (degrees Brix) with correction for temperature to the equivalent at 20° C. (68° F.), but without correction for invert sugars or other substances. The degrees Brix of the packing media may be determined by any other method which gives equivalent results.

(d) Brix determination is made on the packing media 15 days or more after the grapefruit and orange for salad is canned or the blended homogenized slurry of the comminuted entire contents of the container if canned for less than 15 days.

§ 52.1255 Fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled as full as practicable with grapefruit and orange for salad without impairment of quality and that the product and packing media occupy not less than 90 percent of the total capacity of the container.

Total capacity of the container means the maximum weight of distilled water, at 20 degrees C. (68 degrees F.) which the sealed container will hold.

§ 52.1256 Minimum drained weights.

(a) *General.* The minimum drained weight requirements for the various container sizes are listed in Table I. The drained weight of the grapefruit and orange for salad is not less than 53 percent of the water capacity of the container.

(b) *Definitions.*

(1) Sample average—the average of all the drained weights of the sample containers representing a lot.

(2) X_d—a specified minimum sample average drained weight.

(3) *LL*—lower limit for individual container drained weights.

(c) *Method for determining drained weight.* The drained weight of canned grapefruit and orange for salad is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (square openings 0.0937 inch (2.38 mm) ±3 percent) so as to distribute the product evenly over the sieve. Without shifting the product, incline the sieve at an angle of approximately 17° to 20° to facilitate drainage and allow to drain for 2 minutes. The weight of drained grapefruit and orange for salad is the weight of the sieve and product less the weight of the dry sieve. A sieve 8 inches in diameter is used if the contents of the container is less than 3 pounds and a sieve 12 inches in diameter is used if the contents of the container is 3 pounds or more.

(d) *Compliance with drained weight requirements.* A lot of canned grapefruit and orange for salad is considered as meeting the minimum drained weight requirements when the following criteria are met:

(1) The sample average meets the specified minimum sample average drained weight (designated as "X_d" in Table I); and

(2) The number of containers which fail to meet the minimum drained weight for individual containers (designated as "*LL*" in Table I) does not exceed the applicable acceptance number specified in Table II.

TABLE I—MINIMUM DRAINED WEIGHTS

Container designation	X_d (ounces)	LL (ounces)
8Z (211 × 304)	4.60	4.25
No. 303 (303 × 406)	8.95	8.50
No. 3 cylinder (404 × 700)	27.40	26.30

TABLE II—SINGLE SAMPLING PLANS AND ACCEPTANCE NUMBERS

Sample size (number of sample containers)	3	6	13	21	29	38	48	60
Acceptance numbers	0	1	2	3	4	5	6	7

§ 52.1257 Sample unit size.

Compliance with requirements for factors of quality is based on a sample unit comprised of the entire contents of one container, irrespective of container size.

§ 52.1258 Determining the grade of a sample unit.

(a) *General.* The grade of a sample unit of canned grapefruit and orange for salad is determined by considering the factor of flavor and odor which is not scored; the ratings for the factors of wholeness, color, defects, and character which are scored; the total score; and the limiting rules which may be applicable.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor are:

Factors	Points
Wholeness	25
Color	25
Defects	25
Character	25
Total	100

(c) *Definitions.* (1) "Percentage of orange fruit" means the drained weight of the orange ingredient multiplied by 100 and divided by the drained weight of the total fruit ingredients. Compliance with this requirement shall be based on the sample average (average of all sample units representing a lot): *Provided,* That the weight of drained orange fruit in no single container is less than 25 percent or more than 75 percent of the drained fruit in such container. It is recommended that the number of orange units be not less than the number of grapefruit units.

(2) "Good flavor and odor" means that the product has a distinct and normal flavor and odor typical of canned grapefruit and orange for salad and is free from objectionable flavors and objectionable odors of any kind.

(3) "Reasonably good flavor and odor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.1259 Determining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "23 to 25 points" means 23, 24, or 25 points).

§ 52.1260 Wholeness.

(a) *General.* A "practically whole unit" means:

(1) A fruit unit that is substantially intact and retains its apparent original conformation; or

(2) A portion of a unit that is not less than 75 percent of its apparent original size.

(b) *"A" classification.* Sample units of canned grapefruit and orange for salad that consists of not less than 65 percent by weight of each drained fruit ingredient in practically whole units may be given a score of 21 to 25 points.

(c) *"B" classification.* Sample units of canned grapefruit and orange for salad that consists of less than 65 percent but not less than 40 percent by weight of either or both of the drained fruit ingredients in practically whole units may be given a score of 17 to 20 points. In addition the sample average (average of all sample units representing a lot) shall not be less than 50 percent by weight in practically whole units. Sample units of canned grapefruit and orange for salad that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.)

(d) *"Broken" classification.* Sample units of canned grapefruit and orange for salad that individually consist of less than 40 percent by weight of either or both of the drained fruit ingredients in practically whole units, or average (average of all sample units) less than 50 percent by weight of either or both of the drained fruit ingredients in practically whole units may be given a score of 0 to 16 points. Sample units of canned grapefruit and orange for salad that fall into this classification shall not be graded above U.S. Broken, regardless of the total score for the product. (This is a limiting rule.)

[40 FR 15897, Apr. 8, 1975. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981. Further redesignated and amended at 49 FR 1334, Jan. 11, 1984]

§ 52.1261 Color.

(a) *"A" classification.* Canned grapefruit and orange for salad that has a good color may be given a score of 23 to 25 points. "Good color" means that:

(1) With respect to the grapefruit, a practically uniform, bright, typical color free from any noticeable tinge of amber; and

(2) With respect to the orange fruit, a practically uniform, bright, typical orange color.

(b) *"B" classification.* Canned grapefruit and orange for salad that has a reasonably good color may be given a score of 21 or 22 points. Canned grapefruit and orange for salad that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.) "Reasonably good color" means that:

(1) With respect to the grapefruit, at least a fairly bright color which may be variable but is not off-color for any reason; and

(2) With respect to the orange fruit, at least a fairly bright, typical orange color which may be variable.

(c) *"SStd." classification.* Canned grapefruit and orange for salad that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

§ 52.1262 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from extraneous vegetable material, from seeds, from portions of albedo, from portions of tough membrane, from damaged units, and from other similar defects.

(1) "Extraneous vegetable material" means, portions of leaves, small pieces of peel, and other similar material that is harmless.

(2) "Seed" means any seed or any portion thereof, whether or not fully developed, that measures more than 3/16 inch in any dimension.

(3) "Large seed" means any seed or any portion thereof, whether or not fully developed, that measures more than 3/8 inch in any dimension.

(4) "Damaged unit" means any grapefruit or orange unit or portion thereof that is damaged by lye peeling, by discoloration, or by similar injury or that is otherwise damaged to such an extent that the appearance or eating quality of the unit is materially affected.

(b) *"A" classification.* Canned grapefruit and orange for salad that is practically free from defects may be given a score of 23 to 25 points. "Practically free from defects" means that:

(1) All defects present, whether or not specifically defined or listed in this section, do not more than slightly affect the appearance or edibility of the product; and

(2) The defects that may be present in a sample unit and in the entire sample do not exceed the allowances specified in Table III.

(c) *"B" classification.* Canned grapefruit and orange for salad that is reasonably free from defects may be given a score of 21 or 22 points. Canned grapefruit and orange for salad that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. (This is a limiting rule.) "Reasonably free from defects" means that:

(1) All defects present, whether or not specifically defined or listed in this section, may materially, but not seriously, affect the appearance or edibility of the product; and

(2) The defects that may be present in a sample unit and in the entire sample do not exceed the allowances specified in Table IV.

(d) *"SStd." classification.* Canned grapefruit and orange for salad that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

TABLE III—ALLOWANCES FOR DEFECTS IN CANNED GRAPEFRUIT AND ORANGE FOR SALAD, U.S. GRADE A (MAXIMUM)

Defects—extraneous vegetable material	8Z (211 × 304)		No. 303 (303 × 406)		No. 3 CYL. (404 × 700)	
	Sample unit—1 piece	Sample average—0.25 piece	Sample unit—1 piece	Sample average—0.50 piece	Sample unit—1 piece	Sample average—0.75 piece
Seeds and large seeds.	Total of 3 seeds including not more than 1 large seed.	1.6 seeds including not more than 0.4 large seed.	Total of 4 seeds including not more than 2 large seeds.	3.2 seeds including not more than 0.8 large seed.	Total of 10 seeds including not more than 3 large seeds.	
Albedo and tough membrane.	1 in^2	½ in^2	2 in^2	1 in^2	5 in^2	4 in.^{2}
Damaged units	¼ oz		½ oz		1½ oz	
Total [1]						

[1] All defects specified above and/or any other defects that may be present.
[2] Cumulative effect does not more than slightly affect the appearance or eating quality of the product.

TABLE IV—ALLOWANCES FOR DEFECTS IN CANNED GRAPEFRUIT AND ORANGE FOR SALAD—U.S. GRADE B (MAXIMUM)

Defects—extraneous vegetable material	8Z (211 × 304)		No. 303 (303 × 406)		No. 3 CYL. (404 × 700)	
	Sample unit—2 pieces	Sample average—0.50 piece	Sample unit—2 pieces	Sample average—0.75 piece	Sample unit—2 pieces	Sample average—1 piece
Seeds and large seeds.	Total of 6 seeds including not more than 2 large seeds..	4.8 seeds including not more than 1.2 large seeds..	Total of 12 seeds including not more than 3 large seeds..	9.6 seeds including not more than 2.4 large seeds..	Total of 20 seeds including not more than 5 large seeds..	
Albedo and tough membrane	1½ in^2	¾ in^2	3 in^2	2 in^2	7½ in^2	6 in.^{2}
Damaged units	¾ oz		1½ oz		4 oz	
Total [1]						

[1] All defects specified above and/or any other defects that may be present.
[2] Cumulative effect may materially, but not seriously, affect the appearance or eating quality of the product.

[40 FR 15897, Apr. 8, 1975. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981. Further redesignated and amended at 49 FR 1334, Jan. 11, 1984]

§ 52.1263 Character.

(a) *General.* The factor of character refers to the structure and condition of the cells of the grapefruit and orange and reflects the maturity of the fruits.

(b) *"A" classification.* Canned grapefruit and orange for salad that has a good character may be given a score of 23 to 25 points. "Good character" means that the grapefruit and orange units are moderately firm and fleshy; that the units or portions thereof have a juicy, cellular structure free from dry cells, or "ricey" cells, or fibrous cells that materially affects the appearance or eating quality of the product.

(c) *"B" classification.* Canned grapefruit and orange for salad that has a reasonably good character may be given a score of 21 to 22 points. Canned grapefruit and orange for salad that falls into this classification shall not be graded above U.S. Grade

B, regardless of the total score for the product. (This is a limiting rule.) "Reasonably good character" means that the grapefruit and orange units may be affected, but not seriously so, by dry cells, "ricey" cells or fibrous cells that detract from the appearance or eating quality of the product.

(d) *"SStd." classification.* Canned grapefruit and orange for salad that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product. (This is a limiting rule.)

[40 FR 15897, Apr. 8, 1975. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981. Further redesignated and amended at 49 FR 1334, Jan. 11, 1984]

§ 52.1264 Determining the grade of a lot.

The grade of a lot of canned grapefruit and orange for salad covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.83).

Subpart—United States Standards for Grades of Grapefruit Juice and Orange Juice (or Orange Juice and Grapefruit Juice)[1]

SOURCE: 37 FR 21155, Oct. 6, 1972, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.1281 Product description.

(a) Grapefruit Juice and Orange Juice (or Orange Juice and Grapefruit Juice), hereinafter referred to as Grapefruit Juice and Orange Juice, is prepared from a combination of unfermented juices obtained from mature fresh grapefruit (Citrus paradisi) and mature sweet oranges (Citrus sinensis). The juice of oranges from the mandarin group (Citrus reticulata), however, may be added in such quantities that not more than 10 percent, by volume, of the orange juice ingredient consists of juice from citrus reticulata. It is recommended that the minor juice ingredient (either orange or grapefruit) provide not less than 25 percent, by weight, of the total soluble fruit solids present in the finished product.

(b) The fruit is prepared and the juice extracted and processed in a manner to assure a clean and wholesome product.

(c) Soluble solids, insoluble solids, Brix-acid ratios, and flavor may be adjusted by suitable manufacturing procedures.

(d) The product is processed by appropriate physical means to assure its preservation through normal marketing channels. Such means include, but are not limited to:

(1) *Canning.* Processing with heat so as to assure the preservation of the juice in hermetically sealed containers.

(2) *Refrigerating.* Reducing the temperature of the product so as to extend its market life. The juice may or may not have been subjected to heat prior to refrigerating. It may or may not be packed in hermetically sealed containers.

§ 52.1282 Types.

The product may be identified as one of the following types:

(a) *Single strength type.* Composed of single strength grapefruit juice and orange juice, with or without added grapefruit juice concentrate and/or orange juice concentrate.

(b) *Reconstituted type.* Composed of grapefruit juice concentrate and orange juice concentrate and water, with or without added single strength grapefruit juice and/or single strength orange juice.

§ 52.1283 Styles.

(a) Unsweetened.

(b) Sweetened.

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.

§ 52.1284 Grades.

(a) U.S. Grade A (or U.S. Fancy) is the quality of grapefruit juice and orange juice that:

(1) Shows no coagulation;

(2) Has a good color;

(3) Is practically free from defects;

(4) Has a good flavor; and

(5) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) U.S. Grade B (or U.S. Choice) is the quality of grapefruit juice and orange juice that:

(1) May show only a slight coagulation;

(2) Has a reasonably good color;

(3) Is reasonably free from defects;

(4) Has a reasonably good flavor; and

(5) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) Substandard is the quality of grapefruit juice and orange juice that fails to meet the requirements of U.S. Grade B.

FILL OF CONTAINER

§ 52.1285 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that the container be as full of grapefruit juice and orange juice as practicable and that the product occupy not less than 90 percent of the volume capacity of the container.

FACTORS OF QUALITY

§ 52.1286 Ascertaining the grade.

(a) *General.* Consideration is given to the degree of coagulation, the ratings for the factors which are scored, and the limiting rules which may apply.

(b) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Defects	40
Flavor	40
Total score	100

§ 52.1287 Ascertaining the rating for the factors which are scored.

The essential variations, within each factor which is scored, are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1288 Color.

(a) (*A*) *classification.* Grapefruit juice and orange juice that has a good color may be given a score of 18 to 20 points. "Good color" means that the juice mixture has a yellow-orange color that is bright and typical of the freshly extracted juice of oranges and either white fleshed grapefruit or red or pink fleshed grapefruit, and is free from browning due to scorching, oxidation, caramelization, or other causes.

(b) (*B*) *classification.* Grapefruit juice and orange juice that has a reasonably good color may be given a score of 16 or 17 points. Juice that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the juice has a fairly typical color that may range from light yellow to light amber, may be dull or show evidence of slight browning, but is not off color.

(c) (*SStd*) *classification.* Grapefruit juice and orange juice that fails the color requirements of U.S. Grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1289 Defects.

(a) *General.* The factor of defects concerns the degree of freedom from small seeds and seed portions; from discolored specks, harmless extraneous material, and other similar defects; from juice sacs and particles of membrane, core, and peel in excess of that normally present in grapefruit juice and orange juice; and from free and suspended pulp.

(b) *(A) classification.* (1) Grapefruit juice and orange juice that is practically free from defects may be given a score of 36 to 40 points.

(2) "Practically free from defects" means that the juice may not contain more than 12 percent free and suspended pulp as determined by the method outlined in this subpart, and that any other defects present may no more than slightly detract from the appearance or drinking quality of the juice.

(c) *(B) classification.* (1) Grapefruit juice and orange juice that is reasonably free from defects may be given a score of 32 to 35 points. Such product shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(2) "Reasonably free from defects" means that the juice may not contain more than 18 percent free and suspended pulp as determined by the method outlined in this subpart, and that any other defects present may no more than materially detract from the appearance or drinking quality of the juice.

(d) *(SStd) classification.* Grapefruit juice and orange juice that fails to meet the requirements of U.S. Grade B may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1290 Flavor.

(a) *(A) classification.* (1) Grapefruit juice and orange juice that has a good flavor may be given a score of 36 to 40 points.

(2) "Good flavor" means the following with respect to the method of preservation used:

(i) *Refrigerated juice* or juice not subjected to high temperatures prior to refrigerating: "Good flavor" means a flavor that is fine, distinct, and substantially typical of freshly extracted grapefruit juice and orange juice which is free from off flavors and off odors of any kind;

(ii) *Canned juice* or juice that has been subjected to high temperatures: "Good flavor" means a fine, distinct grapefruit juice and orange juice flavor which is free from off flavors and off odors of any kind; and

(iii) The flavor of all juices may be affected only slightly by the process, the packaging, or storage conditions and the juice complies with the analytical limits listed in Table I.

TABLE I—ANALYTICAL REQUIREMENTS—U.S. GRADE A

Type style	Single strength		Reconstituted	
	Unsweetened	Sweetened	Unsweetened	Sweetened
Brix (Degrees) Minimum	10.0°	11.5°	11.0°	12.5°
Brix-Acid Ratio—				
If Brix is less than 11.5°:				
Minimum	9.5:1		9.5:1	
Maximum	18.0:1		18.0:1	
If Brix is 11.5° or more:				
Minimum	8.5:1	10.5:1	9.5:1	10.5:1
Maximum	18.0:1	18.0:1	18.0:1	18.0:1
Oil—Maximum percent by volume	0.035	0.035	0.035	0.035

(b) *(B) classification.* (1) Grapefruit juice and orange juice that has a reasonably good flavor may be given a score of 32 to 35 points. Grapefruit juice and orange juice of this flavor shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(2) "Reasonably good flavor" means a flavor less desirable than "good flavor" because of excess bitterness, terpenic, processing, storage, or con-

tainer flavors but is not seriously objectionable and is free from off flavors and off odors of any kind. Such juice complies with the analytical limits listed in Table II.

TABLE II—ANALYTICAL REQUIREMENTS—U.S. GRADE B

Type Style	Single strength		Reconstituted	
	Unsweetened	Sweetened	Unsweetened	Sweetened
Brix (Degrees) Minimum	9.5°	11.5°	11.0°	12.5°
Brix-Acid Ratio:				
Minimum	8.0:1	10.5:1	9.0:1	10.5:1
Maximum	None	None	None	None
Oil—Maximum percent by volume	0.055	0.055	0.055	0.055

(c) *(SStd) classification.* Grapefruit juice and orange juice that fails the requirements of the U.S. Grade B classification may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSIS

§ 52.1291 Definitions of terms and methods of analysis.

(a) *Brix.* "Brix" means the degrees Brix of the juice when tested with a Brix hydrometer calibrated at 20° C. (68° F.) and to which any applicable temperature correction has been made. The degrees Brix may be determined by any other method which gives equivalent results.

(b) *Acid.* "Acid" means the grams of total acidity, calculated as anhydrous citric acid, per 100 grams of juice. Total acidity is determined by titration with standard sodium hydroxide solution, using phenolphthalein as indicator.

(c) *Brix-Acid ratio.* "Brix-Acid ratio" is the ratio of the degrees Brix of the grapefruit juice and orange juice to the grams of anhydrous citric acid per 100 grams of the juice.

(d) *Free and suspended pulp.* "Free and suspended pulp" means the percentage of pulp determined by the following method: Graduated centrifuge tubes with a capacity of 50 ml. are filled with juice and placed in a suitable centrifuge. The speed is adjusted, according to diameter, as indicated in Table No. III, and the juice is centrifuged for exactly 10 minutes. As used in this subparagraph, "diameter" means the overall distance between the bottoms of opposing centrifuge tubes in operating position. After centrifuging, the milliliter reading at the top of the layer of pulp in the tube is multiplied by 2 to give the percentage of pulp.

TABLE III

Diameter (inches)	Approximate revolutions per minute
10	1,609
10½	1,570
11	1,534
11½	1,500
12	1,468
12½	1,438
13	1,410
13½	1,384
14	1,359
14½	1,336
15	1,313
15½	1,292
16	1,271
16½	1,252
17	1,234
17½	1,216
18	1,199
18½	1,182
19	1,167
19½	1,152
20	1,137

(e) *Recoverable oil.* "Recoverable oil" means the percent of oil by volume, determined by the Bromate titration method as described in the current issue of the Official Methods of

Analysis of the Association of Analytical Chemists.[2]

LOT COMPLIANCE

§ 52.1292 Ascertaining the grade of a lot.

The grade of a lot of grapefruit juice and orange juice covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.1293 Score sheet.

Size and kind of container ....
Container mark or identification:
Cans ....
Cases ....
Label (including ingredient statement, if any) ....
Liquid measure (fluid ounces) ....
Vacuum (inches) ....
Style ....
Brix (degrees) ....
Acid (grams/100 gms: calculated as anhydrous citric acid) ....
Brix-acid ratio (:1) ....
Pulp (free and suspended) (%) ....
Recoverable oil (% by Volume) ....
Degree of coagulation (None), (Slight), or (Serious) ....

Scoring factors		Score points	
Color	20	(A)	18-20
		(B)[2]	16-17
		(SStd)[2]	0-15
Defects	40	(A)	36-40
		(B)[2]	32-35
		(SStd)[2]	0-31
Flavor	40	(A)	36-40
		(B)[2]	32-35
		(SStd)[2]	0-31
Total score	100		

Grade ....

[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Concentrated Blended Grapefruit Juice and Orange Juice

SOURCE: 18 FR 7999, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.1311 Product description.

Frozen concentrated blended grapefruit juice and orange juice is the frozen product prepared from a combination of concentrated, unfermented juices obtained from sound, mature grapefruit (Citrus paradisi) and from sound, mature fruit of the sweet orange group (Citrus sinensis) and Mandarin group (Citrus reticulata) except tangerines. The fruit is prepared by sorting and by washing prior to extraction of the juices to assure a clean product. The juices may be blended upon extraction of such juices or after concentration and fresh orange juice extracted from sorted and washed fruit, as aforesaid, is admixed to the concentrate. It is recommended that the frozen concentrated blended grapefruit juice and orange juice be composed of the equivalent of not less than 50 percent orange juice in the reconstituted juice; however, in oranges yielding light-colored juice it is further recommended that as much as the equivalent of 75 percent orange juice in the reconstituted juice be used. The concentrated juice is packed in accordance with good commercial practice and is frozen and maintained at temperatures necessary for the preservation of the product.

§ 52.1312 Styles of frozen concentrated blended grapefruit juice and orange juice.

(a) *Style I, without sweetening ingredient added.* The Brix value of the finished concentrate shall be not less than 40 degrees nor more than 44 degrees.

(b) *Style II, with sweetening ingredient added.* The finished concentrate exclusive of added sweetening ingredient has a Brix value of not less than 38 degrees; and the finished concentrate, including added sweetening ingredient shall have a Brix value of not less than 40 degrees but not more than 48 degrees.

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[2] Copies may be obtained from this Association at Box 540, Benjamin Franklin Station, Washington, D.C. 20044.

§ 52.1313 Grades of frozen concentrated blended grapefruit juice and orange juice.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen concentrated blended grapefruit juice and orange juice which reconstitutes properly and of which the reconstituted juice possesses the appearance of fresh juices of such a blend; possesses a very good color is practically free from defects; possesses a very good flavor; and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen concentrated blended grapefruit juice and orange juice which reconstitutes properly and of which the reconstituted juice possesses a good color; is reasonably free from defects; possesses a good flavor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen concentrated blended grapefruit juice and orange juice that fails to meet the requirements of U.S. Grade B or U.S. Choice.

FILL OF CONTAINER

§ 52.1314 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled with frozen concentrated blended grapefruit juice and orange juice as full as practicable without impairment of quality.

FACTORS OF QUALITY

§ 52.1315 Ascertaining the grade.

(a) The grade of frozen concentrated blended grapefruit juice and orange juice is ascertained by considering in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and flavor.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Absence of defects	40
Flavor	40
Total score	100

§ 52.1316 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1317 Color.

(a) (*A*) *classification.* Frozen concentrated blended grapefruit juice and orange juice of which the reconstituted juice possesses a very good color may be given a score of 17 to 20 points. "Very good color" means that the color is bright, light yellow-orange, and typical of freshly extracted juices of such a blend and is free from any trace of browning indicative of scorching, oxidation, caramelization, or other causes.

(b) (*B*) *classification.* If the reconstituted juice possesses a "good color," a score of 14 to 16 points may be given. Frozen concentrated blended grapefruit juice and orange juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Good color" means that the color may range from light yellow to light amber, is fairly typical of freshly extracted juices of such a blend and may be slightly dull or may show traces of browning but is not off color for any reason.

(c) (*SStd*) *classification.* If the reconstituted juice fails to meet the requirements of paragraph (b) of this section, a score of 0 to 13 points may be given. Frozen concentrated blended grapefruit juice and orange juice that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1318 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from seeds and portions thereof, from excessive juice cells, from free and suspended pulp, from recoverable oil, and from other defects.

(1) "Free and suspended pulp" means particles of membrane, core, and peel and other similar extraneous materials in the reconstituted blended grapefruit juice and orange juice.

(b) *(A) classification.* Frozen concentrated blended grapefruit juice and orange juice of which the reconstituted juice is practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that there may be present: (1) Small seeds or portions thereof that are of such size that they could pass through round perforations not exceeding one-eighth inch in diameter, provided such seeds or portions thereof do not materially affect the appearance or drinking quality of the juice; (2) juice cells that do not materially affect the appearance or drinking quality of the juice; (3) other defects that are not more than slightly objectionable, and (4) not more than 12 percent free and suspended pulp. To score in this classification the frozen concentrated blended grapefruit juice and orange juice may contain not more than 0.097 ml. of recoverable oil per 100 grams of the concentrated product.

(c) *(B) classification.* If the reconstituted juice is reasonably free from defects, a score of 28 to 33 points may be given. Frozen concentrated blended grapefruit juice and orange juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present: (1) Small seeds or portions thereof that are of such size that they could pass through round perforations not exceeding one-eighth inch in diameter, provided such seeds or portions thereof do not seriously affect the appearance or drinking quality of the juice; (2) juice cells that do not seriously affect the appearance or drinking quality of the juice; (3) other defects that are not materially objectionable, and (4) not more than 18 percent free and suspended pulp. To score in this classification the frozen concentrated blended grapefruit juice and orange juice may contain not more than 0.113 ml. of recoverable oil per 100 grams of the concentrated product.

(d) *(SStd) classification.* Frozen concentrated blended grapefruit juice and orange juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 7999, Dec. 9, 1953, as amended at 33 FR 11882, Aug. 22, 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1319 Flavor.

(a) *(A) classification.* Frozen concentrated blended grapefruit juice and orange juice of which the reconstituted juice possesses a very good flavor may be given a score of 34 to 40 points. "Very good flavor" means that the flavor is fine, distinct, and substantially typical of freshly extracted juices of such a blend. To score not less than 34 points frozen concentrated blended grapefruit juice and orange juice shall meet the following requirements for the respective style:

TABLE I—MAXIMUM AND MINIMUM ACID FOR FROZEN CONCENTRATED BLENDED GRAPEFRUIT JUICE AND ORANGE JUICE

[Style I. Without sweetening ingredient added]

Brix value of the concentrate in degrees Brix	U.S. grade A or U.S. fancy—acid percent by weight		U.S. grade B or U.S. choice—acid percent by weight	
	Ratio 10:1 (maximum)	Ratio 16:1 (minimum)	Ratio 8:1 (maximum)	Ratio 18:1 (minimum)
40.0°	4.00	2.50	5.00	2.22
40.1°	4.01	2.51	5.01	2.23
40.2°	4.02	2.51	5.03	2.23
40.3°	4.03	2.52	5.04	2.24
40.4°	4.04	2.53	5.05	2.24
40.5°	4.05	2.53	5.06	2.25
40.6°	4.06	2.54	5.08	2.26
40.7°	4.07	2.54	5.09	2.26
40.8°	4.08	2.55	5.10	2.27

TABLE I—MAXIMUM AND MINIMUM ACID FOR FROZEN CONCENTRATED BLENDED GRAPEFRUIT JUICE AND ORANGE JUICE—Continued

[Style I. Without sweetening ingredient added]

Brix value of the concentrate in degrees Brix	U.S. grade A or U.S. fancy—acid percent by weight		U.S. grade B or U.S. choice—acid percent by weight	
	Ratio 10:1 (maximum)	Ratio 16:1 (minimum)	Ratio 8:1 (maximum)	Ratio 18:1 (minimum)
40.9°	4.09	2.56	5.11	2.27
41.0°	4.10	2.56	5.13	2.28
41.1°	4.11	2.57	5.14	2.28
41.2°	4.12	2.58	5.15	2.29
41.3°	4.13	2.58	5.16	2.29
41.4°	4.14	2.59	5.18	2.30
41.5°	4.15	2.59	5.19	2.31
41.6°	4.16	2.60	5.20	2.31
41.7°	4.17	2.61	5.21	2.32
41.8°	4.18	2.61	5.23	2.32
41.9°	4.19	2.62	5.24	2.33
42.0°	4.20	2.63	5.25	2.33
42.1°	4.21	2.63	5.26	2.34
42.2°	4.22	2.64	5.28	2.34
42.3°	4.23	2.64	5.29	2.35
42.4°	4.24	2.65	5.30	2.35
42.5°	4.25	2.66	5.31	2.36
42.6°	4.26	2.66	5.33	2.37
42.7°	4.27	2.67	5.34	2.37
42.8°	4.28	2.68	5.35	2.38
42.9°	4.29	2.68	5.36	2.38
43.0°	4.30	2.69	5.38	2.39
43.1°	4.31	2.69	5.39	2.39
43.2	4.32	2.70	5.40	2.40
43.3°	4.33	2.71	5.41	2.41
43.4°	4.34	2.71	5.43	2.41
43.5°	4.35	2.72	5.44	2.42
43.6°	4.36	2.73	5.45	2.42
43.7°	4.37	2.73	5.46	2.43
43.8°	4.38	2.74	5.48	2.43
43.9°	4.39	2.74	5.49	2.44
44.0°	4.40	2.75	5.50	2.44

TABLE II—MAXIMUM AND MINIMUM ACID FOR FROZEN CONCENTRATED BLENDED GRAPEFRUIT JUICE AND ORANGE JUICE

[Style II. With sweetening ingredient added]

Brix value of the concentrate in degrees Brix	U.S. grade A or U.S. fancy—acid percent by weight		U.S. grade B or U.S. choice—acid percent by weight	
	Ratio 11:1 (maximum)	Ratio 13:1 (minimum)	Ratio 9:1 (maximum)	Ratio 13:1 (minimum)
40.0°	3.64	3.08	4.44	3.08
40.1°	3.65	3.08	4.46	3.08
40.2°	3.65	3.09	4.47	3.09
40.3°	3.66	3.10	4.48	3.10
40.4°	3.67	3.11	4.49	3.11
40.5°	3.68	3.12	4.50	3.12
40.6°	3.69	3.12	4.51	3.12
40.7°	3.70	3.13	4.52	3.13
40.8°	3.71	3.14	4.53	3.14
40.9°	3.72	3.15	4.54	3.15
41.0°	3.73	3.15	4.56	3.15
41.1°	3.74	3.16	4.57	3.16
41.2°	3.75	3.17	4.58	3.17
41.3°	3.75	3.18	4.59	3.18
41.4°	3.76	3.18	4.60	3.18
41.5°	3.77	3.19	4.61	3.19
41.6°	3.78	3.20	4.62	3.20
41.7°	3.79	3.21	4.63	3.21
41.8°	3.80	3.22	4.64	3.22
41.9°	3.81	3.22	4.66	3.22
42.0°	3.82	3.23	4.67	3.23
42.1°	3.83	3.24	4.68	3.24
42.2°	3.84	3.25	4.69	3.25
42.3	3.85	3.25	4.70	3.25
42.4°	3.85	3.26	4.71	3.26
42.5°	3.86	3.27	4.72	3.27
42.6°	3.87	3.28	4.73	3.28
42.7°	3.88	3.28	4.74	3.28
42.8°	3.89	3.29	4.76	3.29
42.9	3.90	3.30	4.77	3.30
43.0°	3.91	3.31	4.78	3.31
43.1°	3.92	3.32	4.79	3.32
43.2°	3.93	3.32	4.80	3.32
43.3°	3.94	3.33	4.81	3.33
43.4°	3.95	3.34	4.82	3.34
43.5°	3.95	3.35	4.83	3.35
43.6°	3.96	3.35	4.84	3.35
43.7°	3.97	3.36	4.86	3.36
43.8°	3.98	3.37	4.87	3.37
43.9°	3.99	3.38	4.88	3.38
44.0°	4.00	3.38	4.89	3.38
44.1°	4.01	3.39	4.90	3.39
44.2°	4.02	3.40	4.91	3.40
44.3°	4.03	3.41	4.92	3.41
44.4°	4.04	3.42	4.93	3.42
44.5°	4.05	3.42	4.94	3.42
44.6°	4.05	3.43	4.96	3.43
44.7°	4.06	3.44	4.97	3.44
44.8°	4.07	3.45	4.98	3.45
44.9°	4.08	3.45	4.99	3.45
45.0°	4.09	3.46	5.00	3.46
45.1°	4.10	3.47	5.01	3.47
45.2°	4.11	3.48	5.02	3.48
45.3°	4.12	3.48	5.03	3.48
45.4°	4.13	3.49	5.04	3.49
45.5°	4.14	3.50	5.06	3.50
45.6°	4.15	3.51	5.07	3.51
45.7°	4.15	3.52	5.08	3.52
45.8	4.16	3.52	5.09	3.52
45.9°	4.17	3.53	5.10	3.53
46.0	4.18	3.54	5.11	3.54
46.1	4.19	3.55	5.12	3.55
46.2°	4.20	3.55	5.13	3.55
46.3°	4.21	3.56	5.14	3.56
46.4	4.22	3.57	5.16	3.57
46.5	4.23	3.58	5.17	3.58
46.6°	4.24	3.58	5.18	3.58
46.7	4.25	3.59	5.19	3.59
46.8°	4.25	3.60	5.20	3.60
46.9°	4.26	3.61	5.21	3.61
47.0°	4.27	3.62	5.22	3.62
47.1°	4.28	3.62	5.23	3.62
47.2°	4.29	3.63	5.24	3.63

TABLE II—MAXIMUM AND MINIMUM ACID FOR FROZEN CONCENTRATED BLENDED GRAPEFRUIT JUICE AND ORANGE JUICE—Continued

[Style II. With sweetening ingredient added]

Brix value of the concentrate in degrees Brix	U.S. grade A or U.S. fancy—acid percent by weight		U.S. grade B or U.S. choice—acid percent by weight	
	Ratio 11:1 (maximum)	Ratio 13:1 (minimum)	Ratio 9:1 (maximum)	Ratio 13:1 (minimum)
47.3°	4.30	3.64	5.26	3.64
47.4°	4.31	3.65	5.27	3.65
47.5°	4.32	3.65	5.28	3.65
47.6°	4.33	3.66	5.29	3.66
47.7°	4.34	3.67	5.30	3.67
47.8°	4.35	3.68	5.31	3.68
47.9°	4.35	3.68	5.32	3.68
48.0°	4.36	3.69	5.33	3.69

(1) *Style I, without sweetening ingredient added.* The ratio of Brix value to acid is not less than 10 to 1 nor more than 16 to 1 (See Table I).

(2) *Style II, with sweetening ingredient added.* The ratio of Brix value to acid is not less than 11 to 1 nor more than 13 to 1 (See Table II).

(b) *(B) classification.* If the reconstituted juice possesses a good flavor, a score of 28 to 33 points may be given. Frozen concentrated blended grapefruit juice and orange juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Good flavor" means that the flavor is fairly typical of freshly extracted juices of such a blend and is free from abnormal or off flavors of any kind. To score not less than 28 points frozen concentrated blended grapefruit juice and orange juice shall meet the following requirements for the respective style:

(1) *Style I, without sweetening ingredient added.* The ratio of Brix value to acid is not less than 8 to 1 nor more than 18 to 1 (See Table I).

(2) *Style II, with sweetening ingredient added.* The ratio of Brix value to acid is not less than 9 to 1 nor more than 13 to 1 (See Table II).

(c) *(SStd) classification.* If the frozen concentrated blended grapefruit juice and orange juice fails to meet the requirements of paragraph (b) of this section, a score of 0 to 27 points may be given. Frozen concentrated blended grapefruit juice and orange juice that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.1320 Definitions of terms as used in these standards.

(a) "Oranges" means oranges of the sweet orange group (Citrus sinensis) and the Mandarin group (Citrus reticulata), except tangerines.

(b) "Reconstituted juice" means the product obtained by mixing thoroughly 3 parts by volume of distilled water and one part by volume of frozen concentrated blended grapefruit juice and orange juice.

(c) "Reconstitutes properly" means that the reconstituted juice shows no material separation of colloidal or suspended matter, leaving a zone of definitely clear liquid without any turbidity, after standing four (4) hours at a temperature of not less than 68 degrees Fahrenheit in a clear glass tube or cylinder (such as a 50 ml. graduated cylinder).

(d) "Acid" means the percent by weight of acid (calculated as anhydrous citric acid) in frozen concentrated blended grapefruit juice and orange juice.

TABLE III [1]—CORRECTIONS FOR OBTAINING BRIX VALUE

Citric acid, anhydrous (percent by weight)	Correction to be added to refractometer sucrose value to obtain degree Brix value
2.0	0.39
2.2	.43
2.4	.47
2.6	.51
2.8	.54
3.0	.58
3.2	.62
3.4	.66
3.6	.70
3.8	.74
4.0	.78
4.2	.81
4.4	.85
4.6	.89

TABLE III [1]—CORRECTIONS FOR OBTAINING BRIX VALUE—Continued

Citric acid, anhydrous (percent by weight)	Correction to be added to refractometer sucrose value to obtain degree Brix value
4.8	.93
5.0	.97
5.2	1.01
5.4	1.04
5.6	1.07

[1] Source: "Refractometric Determination of Soluble Solids in Citrus Juices," by J. W. Stevens and W. E. Baier, from the Analytical Edition of Industrial and Engineering Chemistry, Vol. II, Page 447, Aug. 15, 1939.

(e) "Brix value" in frozen concentrated blended grapefruit juice and orange juice is the refractometric sucrose value determined in accordance with the International Scale of Refractive Indices of Sucrose Solutions and to which the applicable correction for acid is added. (See Table III for corrections.)

§ 52.1321 Explanation of analyses.

(a) The measurement of Brix value is determined on the thawed concentrate in accordance with the refractometric method for sugars and sugar products, outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists."

(b) "Acid," calculated as anhydrous citric acid, is determined by titration with standard sodium hydroxide solution, using phenolphthalein as indicator.

(c) "Recoverable oil" is determined by the following method:

METHOD

(1) *Reagents.*

Standard bromide-bromate solution—prepared and standardized to 0.099N in accordance with Chapter 42, Standard Solutions in the current edition of the AOAC.[1] For use, add 1 volume of standard solution to 3 volumes of water to make 0.0247N solution. 1 ml. of 0.0247N solution supplies bromine to react with 0.00085g., or 0.0010 ml., of *d*-limonene. The solutions are stable for 6 months.

2-Propanol—Reagent grade ACS (American Chemical Society).

Dilute hydrochloric acid—prepared by adding 1 volume of concentrated acid to 2 volumes of water.

Methyl orange indicator—0.1 percent in water.

(2) *Apparatus.*

Electric heater—with recessed refractory top, 500-750 watts.

Still, all glass—500 ml. distillation flask with 24/40 standard tape neck; 200 mm. Graham condenser with 28/15 receiving socket and drip tip; connecting bulb and adapter as shown in Figure 1.

Burette—10 ml. or 25 ml. graduated to 0.1 ml., with easily controllable flow to permit both rapid and dropwise titration.

(3) *Determination.*

(i) Pipette 25 ml. of well-mixed sample (juice or reconstituted juice) into the distillation flask containing carborundum chips or glass beads, and add 25 ml. of 2-Propanol.

(ii) Distill into a 150 ml. beaker. Continue distilling until solvent ceases to reflux then remove the flask from the heater.

(iii) Add 10 ml. of dilute hydrochloric acid and 1 drop of indicator. (An alternative method would be to prepare a solution containing 5 ml. of indicator and 1,000 ml. of dilute hydrochloric acid—then add 10 ml. of this acid-indicator mix to the 150 ml. beaker.)

(iv) Titrate with the dilute bromate solution while stirring. The major portion of the titrant may be added rapidly, but the endpoint must be approached at about 1 drop per second. Disappearance of color indicates the endpoint.

(v) Determine the reagent blank by titrating three separate mixtures of 25 ml. 2-Propanol and 10 ml. of dilute hydrochloric acid with indicator—without refilling the burette. Divide the total ml. of titrant used by three to obtain the average blank. Subtract the average blank thus obtained from the ml. of titrant used to titrate the distillate.

(vi) Multiply the remainder by 0.004 to obtain the percent recoverable oil by volume in the juice sample.

(vii) The ml. of recoverable oil per 100 grams of the concentrate is determined as follows:

ml. recoverable oil per 100 grams concentrate= [percent oil by volume recovered](4) /(specific gravity of the concentrate)

(d) "Free and suspended pulp" is determined by the following method: Graduated centrifuge tubes with a capacity of 50 ml. are filled with the reconstituted blended grapefruit juice and orange juice and placed in a suitable centrifuge. The speed is adjusted, according to diameter, as indicated in Table IV, and the juice is centrifuged for exactly 10 minutes. As used herein, "diameter" means the over-all distance between the bottoms of opposing centrifuge tubes in operating position. After centrifuging, the milliliter reading at the top of the layer of pulp in the tube is multiplied by 2 to give the percentage of pulp.

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[1] "AOAC" refers to the Official Methods of Analysis published by the Association of Official Analytical (formerly Agricultural) Chemists. Copies may be obtained from this Association at Box 540, Benjamin Franklin Station, Washington, D.C. 20044.

TABLE IV

Diameter	Approximate revolutions per minute
10 inches	1,609
10½ inches	1,570
11 inches	1,534
11½ inches	1,500
12 inches	1,468
12½ inches	1,438
13 inches	1,410
13½ inches	1,384
14 inches	1,359
14½ inches	1,336
15 inches	1,313
15½ inches	1,292
16 inches	1,272
16½ inches	1,259
17 inches	1,236
17½ inches	1,214
18 inches	1,191
18½ inches	1,182
19 inches	1,167
19½ inches	1,152
20 inches	1,137

[18 FR 7999, Dec. 9, 1953, as amended at 33 FR 11882, Aug. 22, 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT INSPECTION AND CERTIFICATION

§ 52.1322 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1323 Score sheet for frozen concentrated blended grapefruit juice and orange juice.

Size and kind of container ....
Container mark or identification ....
Label ....
Liquid measure (Fl. ounces) ....
Brix value of concentrate (corrected for acid) ....
Anhydrous citric acid (% by weight) ....
Brix value to acid ratio (— :1) ....
Recoverable oil (ml./100 grams) ....
Free and suspended pulp (%) ....
Reconstitutes properly (Yes) (No) ....
Appearance of fresh juice (Yes) (No) ....

Factors		Score points	
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd)	[1] 0-13
Absence of defects.	40	(A)	34-40
		(B)	[1] 28-33
		(SStd)	[1] 0-27
Flavor	40	(A)	34-40
		(B)	[1] 28-33
		(SStd)	[1] 0-27
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Grape Juice

SOURCE: 18 FR 8002, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.1341 Product description.

Canned grape juice is the unfermented liquid obtained from properly matured fresh grapes. Such grape juice is prepared without concentration, without dilution, is packed with or without the addition of sweetening ingredients, and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers (either metal or glass).

§ 52.1342 Types of canned grape juice.

(a) Type I: Concord type (prepared from grapes of the slip-skin varieties of the Concord type of the Labrusca species).

(b) Type II: Any type other than Concord type (prepared from a single variety of grapes other than Concord type).

(c) Type III: Blended type (prepared from two or more varieties of grapes).

§ 52.1343 Styles of canned grape juice.

Unless specifically designated as "sweetened", canned grape juice is considered as "unsweetened."

(a) Style I, Unsweetened (without added sweetening ingredient or ingredients).

(b) Style II, Sweetened (with added sweetening ingredient or ingredients).

§ 52.1344 Grades of canned grape juice.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned grape juice from which tartrate crystals have been removed; that possesses a good color; that is practically free from defects; that possesses a good flavor; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned grape juice from which tartrate crystals have been removed, that possesses a reasonably good color; that is reasonably free from defects; that possesses a reasonably good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Substandard" is the quality of canned grape juice that fails to meet the requirements of U.S. Grade B or U.S. Choice.

FILL OF CONTAINER

§ 52.1345 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled as full as practicable with grape juice and that the product occupy not less than 90 percent of the volume of the container.

FACTORS OF QUALITY

§ 52.1346 Ascertaining the grade.

(a) The grade of canned grape juice is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and flavor.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Absence of defects	20
Flavor	40
Total score	100

§ 52.1347 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1348 Color.

(a) (*A*) *classification.* Canned grape juice that possesses a good color may be given a score of 34 to 40 points. "Good color" has the following meanings with respect to the types of canned grape juice:

(1) Type I. A bright purple or bright reddish-purple color typical of properly prepared and properly processed juice from Concord type grapes.

(2) Types II and III. A bright color typical of properly prepared and properly processed juice characteristic of the varietal type or varietal types from which prepared.

(b) (*B*) *classification.* If the canned grape juice possesses a reasonably good color, a score of 28 to 33 points may be given. Canned grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" has the following meanings with respect to the types of canned grape juice:

(1) Type I: A purple or reddish-purple color typical of canned grape juice prepared from Concord type grapes and which color may be slightly dull purple, slightly dull bluish-purple, or slightly dull reddish-purple but which is not off-color for any reason.

(2) Types II and III: A color typical of canned grape juice characteristic of the varietal type or varietal types from which prepared and which color may be slightly dull but which is not off-color for any reason.

(c) (*SStd*) *classification*. Canned grape juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1349 Absence of defects.

(a) *General*. The factor of absence of defects refers to the degree of freedom from sediment and other residue, from tartrate crystals, from particles of skin, from particles of pulp, from particles of seed, and from any other defects.

(b) (*A*) *classification*. Canned grape juice that is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that the canned grape juice may possess a slight amount of sediment and residue of an amorphous nature; may possess not more than a trace of sediment and residue of a non-amorphous nature; is practically free from tartrate crystals; and is free from particles of skin, particles of pulp, particles of seed, and from any other defects.

(c) (*B*) *classification*. If the canned grape juice is reasonably free from defects, a score of 14 to 16 points may be given. Canned grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the canned grape juice may possess a slight amount of sediment and residue of an amorphous or non-amorphous nature; may possess a slight amount of tartrate crystals; may possess not more than a trace of particles of skin, particles of pulp, particles of seed, and other defects.

(d) (*SStd*) *classification*. Canned grape juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1350 Flavor.

(a) (*A*) *classification*. Canned grape juice that possesses a good flavor may be given a score of 34 to 40 points. "Good flavor" means that the flavor is a distinct and normal flavor, typical of well-matured grapes and that the canned grape juice is free from any trace of scorching, caramelization, and objectionable flavors and objectionable odors of any kind. To score in this classification, canned grape juice shall meet the following additional requirements:

(1) Brix: Style I, unsweetened—not less than 15.0 degrees.

(2) Brix: Style II, sweetened—not less than 17.0 degrees.

(3) Acid: Not less than 0.60 grams per 100 ml. nor more than 1.20 grams per 100 ml., calculated as tartaric acid.

(4) Brix-acid ratio: For both Style I, unsweetened, and Style II, sweetened, not less than 14 to 1 nor more than 28 to 1.

(b) (*B*) *classification*. If the canned grape juice possesses a reasonably good flavor, a score of 28 to 33 points may be given. Canned grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor" means that the flavor is normal and typical of reasonably well-matured grapes and that the canned grape juice may be slightly astringent but is free from any trace of scorching, caramelization, and objectionable flavors and objectionable odors of any kind. To score in this classification, canned grape juice shall meet the following additional requirements:

(1) Brix: Style I, unsweetened—not less than 14.0 degrees.

(2) Brix: Style II, sweetened—not less than 16.0 degrees.

(3) Acid: Not less than 0.45 gram per 100 ml. nor more than 1.40 grams per 100 ml., calculated as tartaric acid.

(4) Brix-acid ratio: For both Style I, unsweetened, and Style II, sweetened, not less than 11.5 to 1.

(c) *(SStd) classification.* Canned grape juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS

§ 52.1351 Explanation of terms.

(a) "Brix" means the degrees Brix of canned grape juice when tested with a Brix hydrometer calibrated at 20 degrees C. (68 degrees F.). If canned grape juice is tested at a temperature other than 20 degrees C. (68 degrees F.), the applicable temperature correction shall be made to the reading of the scale as prescribed in "Official Methods of Analysis of the Association of Official Agricultural Chemists." The degrees Brix of canned grape juice may be determined by any other method which gives equivalent results.

(b) "Acid" means grams of acid (calculated as tartaric acid) per 100 ml. of juice in canned grape juice determined by titration with standard sodium hydroxide solution, using phenolphthalein as indicator or any other satisfactory indicator.

LOT INSPECTION AND CERTIFICATION

§ 52.1352 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1353 Score sheet for canned grape juice.

Size and kind of container ....
Container mark or identification ....
Label ....
Liquid measure (fl. ounces) ....
Vacuum (inches) ....
Type ....
Style ....
Brix (degrees) ....
Acid (tartaric: grams/100 ml.) ....
Brix-acid ratio ....

Factors		Score points	
Color	40	(A)	34-40
		(B)	[1] 28-33
		(D)	[1] 0-27
Absence of defects	20	(A)	17-20
		(B)	[1] 14-16
		(D)	[1] 0-13
Flavor	40	(A)	34-40
		(B)	[1] 28-33
		(D)	[1] 0-27
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Leafy Greens

SOURCE: 48 FR 40879, Sept. 12, 1983, unless otherwise noted.

§ 52.1371 Product description.

"Frozen leafy greens" means the frozen product prepared from the clean, sound, succulent leaves and stems of any one of the plants listed under § 52.1372 by sorting, trimming, washing, blanching, and properly draining. The product is processed by freezing and maintained at temperatures necessary for its preservation. Any functional, optional ingredient(s) permissible under the Federal Food, Drug, and Cosmetic Act may be used to acidify and/or season the product.

§ 52.1372 Types.

(a) Beet greens.
(b) Collards.
(c) Dandelion greens.
(d) Endive.

(e) Kale.

(f) Mustard greens.

(g) Spinach.

(h) Swiss chard.

(i) Turnip greens.

(j) Any other "market accepted" leafy green.

§ 52.1373 Styles.

(a) *Leaf* consists substantially of the leaf, cut or uncut, with or without adjoining portion of the stem.

(b) *Chopped* consists of the leaf with or without adjoining portion of the stem that has been cut into small pieces less than approximately 20 mm (0.78 in) in the longest dimension but not comminuted to a pulp or a puree.

(c) *Pureed* consists of the leaf with or without adjoining portion of the stem that has been comminuted to a pulp or a puree.

§ 52.1374 Definitions of terms.

As used in these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Acceptable Quality Level (AQL)* means the maximum percent of defective units or the maximum number of defects per hundred units of product that, for the purpose of acceptance sampling, can be considered satisfactory as a process average.

(b) *Blemished* means any unit affected by discoloration or other means to the extent that the appearance or eating quality is adversely affected. For leafy greens other than leaf style spinach, each 4 cm^2 in leaf style or each 2 cm^2 in chopped and pureed styles (aggregate area measurement) is counted as one defect. In leaf style spinach only, each 6 cm^2 is counted as one defect.

(c) *Character (other than pureed style*—(1) *Good character* means:

(i) The frozen spinach is tender upon cooking.

(ii) The frozen leafy greens, other than spinach, may be slightly tough upon cooking.

(2) *Reasonably good character* means:

(i) The frozen spinach is reasonably tender upon cooking.

(ii) The frozen leafy greens, other than spinach, may be moderately tough upon cooking.

(3) *Poor character* means the frozen leafy greens fail the requirements for "reasonably good character."

(d) *Defect* (or defective) means any nonconformance of a unit(s) of product from a specified requirement of a single characteristic.

(e) *Extraneous vegetable material (EVM)*. (1) Group I—Green, fine, tender string-like blades and stems of grass and weeds.

(2) Group II—Green, coarse grass and weeds.

(3) Group III—Grass and weeds other than green.

(f) *Flavor and odor. "Normal flavor and odor"* means the frozen product is free from objectionable flavors and odors of any kind after cooking.

(g) *Root crown* means the solid area of the leafy green plant between the root and attached leaves or clusters of leaves.

(h) *Root stub* means any portion of the root whether or not leaves are attached.

(i) *Sample unit* means the amount of product to be used for grading. It may be:

(1) the entire contents of a container;

(2) a portion of the contents of a container;

(3) a combination of the contents of two or more containers;

(4) a portion of unpacked product.

(j) *Seed head* means the seed bearing portion of the leafy green plant that is longer than 2.5 cm (1 in) or that is objectionable in appearance.

(k) *Stem material* (in leaf and chopped styles of spinach only) means the portion of the plant located between the stalk or root crown and the point of attachment to the leaf.

(l) *Unit* means any whole or portion of a leaf or stem from the leafy green plant.

[48 FR 40879, Sept. 12, 1983, as amended at 51 FR 46993, Dec. 30, 1986]

§ 52.1375 Recommended sample unit sizes.

(a) Leaf style—300 g (10.6 oz).

(b) Chopped style—75 g (2.65 oz).

(c) Pureed style—75 g (2.65 oz).

§ 52.1376 Grades.

(a) *U.S. Grade A* is the quality of frozen leafy greens that: (1) Meets the following prerequisites in which the leafy greens:

(i) Have similar varietal characteristics;

(ii) Have a good overall brightness as a mass;

(iii) Have a normal flavor and odor;

(iv) Have a good character (other than pureed style);

(v) May have stem material (leaf style spinach only) that does not exceed an AQL of 20.0;

(vi) May have stem material (chopped style spinach only) that slightly affects the appearance or eating quality;

(vii) May have blemished areas that do not exceed an AQL of 20.0.

(2) Is within the limits for defects as classified in Table I and specified in Table II.

(b) *U.S. Grade B* is the quality of frozen leafy greens that: (1) Meets the following prerequisites in which the leafy greens:

(i) Have similar varietal characteristics;

(ii) Have a fairly good overall brightness as a mass;

(iii) Have a normal flavor and odor;

(iv) Have a reasonably good character (other than pureed style);

(v) May have stem material (leaf style spinach only) that does not exceed an AQL of 25.0;

(vi) May have stem material (chopped style spinach only) that materially affects the appearance or eating quality;

(vii) May have blemished areas that do not exceed an AQL of 40.0.

(2) Is within the limits for defects as classified in Table I and specified in Table II.

(c) *Substandard* is the quality of frozen leafy greens that fails to meet the requirements of *U.S. Grade B.*

§ 52.1377 Factors of quality.

The grade of frozen leafy greens is based on meeting the requirements for the following quality factors:

(a) *Prerequisite quality factors:*

(1) Varietal characteristics;

(2) Brightness;

(3) Flavor and odor;

(4) Character (other than pureed style);

(5) Stem material (leaf and chopped styles of spinach only);

(6) Blemished.

(b) *Classified quality factors:*

(1) Root crowns (leaf style only);

(2) Root stubs (leaf style only);

(3) Seed heads (leaf style only);

(4) Extraneous vegetable material.

§ 52.1378 Classification of defects.

All defects are classified as minor, major, severe, or critical. Each "X" in Table I represents "one (1) defect."

TABLE I—CLASSIFICATION OF DEFECTS

Quality factor	Defect	Classification			
		Minor	Major	Severe	Critical
	LEAF STYLE				
Root crowns	Each piece			X	
Root stubs	Each piece				X
Seeds heads	Each piece			X	
Extraneous vegetable material	Group I (each 2.5 cm increment)	X			
	Group II (each 2.5 cm increment)		X		
	Group III (each 2.5 cm increment)				X
	CHOPPED: PUREED STYLES				
Extraneous vegetable material [1]	Group I (each 1.3 cm increment)	X			
	Group II (each 1.3 cm increment)		X		
	Group III (each 1.3 cm increment)				X

[1] Includes root crown, root stub and seed head material.

§ 52.1379 Tolerances for defects.

TABLE II (ALL STYLES)

	Total [1]	Major	Severe	Critical
Grade A: AQL [2]	15.0	6.5	2.5	0.4
Grade B: AQL [2]	25.0	12.5	6.5	1.5

[1] Total = Minor + Major + Severe + Critical.

[2] AQL expressed as defects per hundred units.

§ 52.1380 Sample size.

The sample size to determine meeting the requirements of these standards shall be as specified in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83) for lot grading and on-line grading, as applicable.

§ 52.1381 Quality requirements.

(a) *Lot grading.* A lot of frozen leafy greens is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.1376 are met; and

(2) The Acceptable Quality Levels (AQL) in Table II are not exceeded.

(b) *On-line grading.* A portion of production is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.1376 are met; and

(2) The Acceptable Quality Levels (AQL) in Table II are not exceeded.

(c) *Single sample unit.* Each single sample unit submitted for quality evaluation will be treated individually and is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.1376 are met; and

(2) The Acceptable Quality Levels (AQL) in Table II are not exceeded.

Subpart—United States Standards for Grades of Extracted Honey

SOURCE: 50 FR 15861, Apr. 23, 1985, unless otherwise noted.

§ 52.1391 Product description.

Extracted honey (hereinafter referred to as honey) is honey that has been separated from the comb by centrifugal force, gravity, straining, or by other means.

§ 52.1392 Types.

The type of extracted honey is not incorporated in the grades of the finished product since the type of extracted honey, as such, is dependent upon the method of preparation and processing, and therefore is not a factor of quality for the purpose of these grades. Extracted honey may be prepared and processed as one of the following types:

(a) *Liquid honey.* Liquid honey is honey that is free from visible crystals.

(b) *Crystallized honey.* Crystallized honey is honey that is solidly granulated or crystallized, irrespective of whether candied, fondant, creamed, or spread types of crystallized honey.

(c) *Partially crystallized honey.* Partially crystallized honey is honey that is a mixture of liquid honey and crystallized honey.

§ 52.1393 Styles.

(a) *Filtered.* Filtered honey is honey of any type defined in these standards that has been filtered to the extent that all or most of the fine particles, pollen grains, air bubbles, or other materials normally found in suspension, have been removed.

(b) *Strained.* Strained honey is honey of any type defined in these standards that has been strained to the extent that most of the particles, including comb, propolis, or other defects normally found in honey, have been removed. Grains of pollen, small air bubbles, and very fine particles would not normally be removed.

§ 52.1394 Definitions of terms.

As used in these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Absence of defects* means the degree of freedom from particles of comb, propolis, or other defects which may be in suspension or deposited as sediment in the honey. Classifications for the factor of quality, absence of defects, are:

(1) *Practically free*—the honey contains practically no defects that affect the appearance or edibility of the product.

(2) *Reasonably free*—the honey may contain defects which do not materially affect the appearance or edibility of the product.

(3) *Fairly free*—the honey may contain defects which do not seriously affect the appearance or edibility of the product.

(b) *Air bubbles* mean small visible pockets of air in suspension that may be numerous in the honey and contribute to the lack of clarity in filtered style.

(c) *Aroma* means the fragrance or odor of the honey.

(d) *Clarity* means, with respect to filtered style only, the apparent transparency or clearness of honey to the eye and to the degree of freedom from air bubbles, pollen grains, or other fine particles of any material suspended in the product. Classifications for the factor of quality, clarity, are:

(1) *Clear*—the honey may contain air bubbles which do not materially affect the appearance of the product and may contain a trace of pollen grains or other finely divided particles of suspended material which do not affect the appearance of the product.

(2) *Reasonably clear*—the honey may contain air bubbles, pollen grains, or other finely divided particles of suspended material which do not materially affect the appearance of the product.

(3) *Fairly clear*—the honey may contain air bubbles, pollen grains, or other finely divided particles of suspended material which do not seriously affect the appearance of the product.

(e) *Comb* means the wax like cellular structure that bees use for retaining their brood or as storage for pollen and honey. Fine particles of comb in suspension are defects and contribute to the lack of clarity in filtered style.

(f) *Crystallization* means honey in which crystals have been formed.

(g) *Flavor and aroma* means the degree of taste excellence and aroma for the predominant floral source. Classifications for the factor of quality, flavor and aroma, are:

(1) *Good flavor and aroma for the predominant floral source*—the product has a good, normal flavor and aroma for the predominant floral source or, when blended, a good flavor for the blend of floral sources and the honey is free from caramelized flavor or objectionable flavor caused by fermentation, smoke, chemicals, or other causes with the exception of the predominant floral source.

(2) *Reasonably good flavor and aroma for the predominant floral source*—the product has a reasonably good, normal flavor and aroma for the predominant floral source or, when blended, a reasonably good flavor for the blend of floral sources and the honey is practically free from caramelized flavor and is free from objectionable flavor caused by fermentation, smoke, chemicals, or other causes with the exception of the predominant floral source.

(3) *Fairly good flavor and aroma for the predominant floral source*—the product has a fairly good, normal flavor and aroma for the predominant floral source or, when blended, a fairly good flavor for the blend of floral sources and the honey is reasonably free from caramelized flavor and is free from objectionable flavor caused by fermentation, smoke, chemicals, or other causes with the exception of the predominant floral source.

(h) *Floral source* means the flower from which the bees gather nectar to make honey.

(i) *Granulation* means the initial formation of crystals in the honey.

(j) *Pfund color grader* means a color grading device used by the honey industry. It is not the officially approved device for determining color designation when applying these United

States grade standards for the color of honey.

(k) *Pollen grains* mean the granular, dustlike microspores that bees gather from flowers. Pollen grains in suspension contribute to the lack of clarity in filtered style.

(l) *Propolis* means a gum that is gathered by bees from various plants. It may vary in color from light yellow to dark brown. It may cause staining of the comb or frame and may be found in extracted honey.

§ 52.1395 Recommended sample unit sizes.

(a) Determination of color designation—the amount of product required to adequately fill a color comparator cell of any approved device used for the determination of honey color.

(b) Factors of quality and analysis—100 g (3.5 oz).

§ 52.1396 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled with honey as full as practicable, and with respect to containers of one gallon or less, the honey shall occupy not less than 95 percent of the total capacity of the container.

§ 52.1397 Color.

The color of extracted honey is not a factor of quality for the purpose of these grades.

§ 52.1398 Color designations.

(a) The color designation of extracted honey is determined (after adjusting for cloudiness in the honey) by means of the USDA approved color standards in accordance with the range as given in Table I.

(b) The respective color designations, applicable range of each color, color range on the Pfund scale, and optical density of freshly prepared caramel-glycerin solutions are shown in Table I.

TABLE I—COLOR DESIGNATIONS OF EXTRACTED HONEY

USDA color standards designations	Color range USDA color standards	Color range pfund scales millimeters	Optical density [1]
Water white	Honey that is water white or lighter in color	8 or less	0.0945
Extra white	Honey that is darker than water white, but not darker than extra white in color.	Over 8 to and including 17	.189
White	Honey that is darker than extra white, but not darker than white in color.	Over 17 to and including 34.	.378
Extra light amber	Honey that is darker than white, but not darker than extra light amber in color.	Over 34 to and including 50.	.595
Light amber	Honey that is darker than extra light amber, but not darker than light amber in color.	Over 50 to and including 85	1.389
Amber	Honey that is darker than light amber, but not darker than amber in color.	Over 85 to and including 114.	3.008
Dark amber	Honey that is darker than amber in color	Over 114	

[1] Optical Density (absorbance) = $\log_{10}$ (100/percent transmittance), at 560 nm for 3.15 cm thickness for caramel-glycerin solutions measured versus an equal cell containing glycerin.

§ 52.1399 Tolerance for the designations of color of officially drawn samples.

When designating the color of samples that have been officially drawn and which represent a specific lot of honey, the lot shall be considered as one color if the number of containers with honey comprised of a darker color does not exceed the applicable acceptance number indicated in the sampling plans contained in 7 CFR 52.38 of the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products:" *Provided*, However, that the honey in none of the containers falls below the next darker color designation. Applicable sampling plans and acceptance numbers are shown in Table II.

TABLE II.—SINGLE SAMPLING PLANS AND ACCEPTANCE NUMBERS

Sample Size (number of sample units)	3	8	13	21	29
Acceptance No	0	1	2	3	4

§ 52.1400 Grades.

(a) *U.S. Grade A* is the quality of extracted honey that meets the applicable requirements of Table IV or V, and has a minimum total score of 90 points.

(b) *U.S. Grade B* is the quality of extracted honey that meets the applicable requirements of Table IV or V, and has a minimum total score of 80 points.

(c) *U.S. Grade C* is the quality of extracted honey that meets the applicable requirements of Table IV or V, and has a minimum total score of 70 points.

(d) *Substandard* is the quality of extracted honey that fails to meet the requirements of U.S. Grade C.

§ 52.1401 Determining the grade.

Determining the grade from the factors of quality and analysis.

(a) For the factor of analysis, the soluble solids content of extracted honey is determined by means of the refractometer at 20 °C (68 °F). The refractive indices, corresponding percent soluble solids, and percent moisture are shown in Table III. The moisture content of honey and percent soluble solids may be determined by any other method which gives equivalent results.

(b) For the factors of quality, the grade of extracted honey is determined by considering, in conjunction with the requirements of the various grades, the respective ratings for the factors of flavor and aroma, absence of defects, and clarity (except the factor of clarity is excluded for the style of strained).

(c) The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Flavor and aroma	50
Absence of defects	40
Clarity	10
Total score	100

(d) The factor of clarity for the style of strained extracted honey is not based on any detailed requirements and is not scored. The other two factors (flavor and absence of defects) are scored and the total is multiplied by 100 and divided by 90, dropping any fractions to determine the total score.

(e) Crystallized honey and partially crystallized honey shall be liquified by heating to approximately 54.4 °C (130 °F) and cooled to approximately 20 °C (68 °F) before determining the grade of the product.

§ 52.1402 Determining the rating for each factor.

The essential variations within each factor are so described that the value may be determined for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, 37 to 40 points means 37, 38, 39, or 40 points) and the score points shall be prorated relative to the degree of excellence for each factor.

§ 52.1403 Requirements for grades.

TABLE III—REFRACTIVE INDICES, CORRESPONDING PERCENT SOLUBLE SOLIDS, AND PERCENT MOISTURE IN EXTRACTED HONEY [1]

Refractive index @ 20 °C (range)	Percent soluble solids	Percent moisture
1.4817 to 1.4818	78.1	21.9
1.4819 to 1.4820	78.2	21.8
1.4821 to 1.4823	78.3	21.7
1.4824 to 1.4825	78.4	21.6
1.4826 to 1.4828	78.5	21.5
1.4829 to 1.4830	78.6	21.4
1.4831 to 1.4833	78.7	21.3
1.4834 to 1.4835	78.8	21.2
1.4836 to 1.4838	78.9	21.1
1.4839 to 1.4840	79.0	21.0
1.4841 to 1.4843	79.1	20.9
1.4844 to 1.4845	79.2	20.8
1.4846 to 1.4848	79.3	20.7
1.4849 to 1.4850	79.4	20.6
1.4851 to 1.4853	79.5	20.5
1.4854 to 1.4855	79.6	20.4
1.4856 to 1.4858	79.7	20.3
1.4859 to 1.4860	79.8	20.2

TABLE III—REFRACTIVE INDICES, CORRESPONDING PERCENT SOLUBLE SOLIDS, AND PERCENT MOISTURE IN EXTRACTED HONEY [1]—Continued

Refractive index @ 20 °C (range)	Percent soluble solids	Percent moisture
1.4861 to 1.4863	79.9	20.1
1.4864 to 1.4865	80.0	20.0
1.4866 to 1.4868	80.1	19.9
1.4869 to 1.4870	80.2	19.8
1.4871 to 1.4873	80.3	19.7
1.4874 to 1.4875	80.4	19.6
1.4876 to 1.4878	80.5	19.5
1.4879 to 1.4880	80.6	19.4
1.4881 to 1.4883	80.7	19.3
1.4884 to 1.4885	80.8	19.2
1.4886 to 1.4888	80.9	19.1
1.4889 to 1.4890	81.0	19.0
1.4891 to 1.4893	81.1	18.9
1.4894 to 1.4896	81.2	18.8
1.4897 to 1.4898	81.3	18.7
1.4899 to 1.4901	81.4	18.6
1.4902 to 1.4903	81.5	18.5
1.4904 to 1.4906	81.6	18.4
1.4907 to 1.4908	81.7	18.3
1.4909 to 1.4911	81.8	18.2
1.4912 to 1.4913	81.9	18.1
1.4914 to 1.4916	82.0	18.0
1.4917 to 1.4918	82.1	17.9
1.4919 to 1.4921	82.2	17.8
1.4922 to 1.4923	82.3	17.7
1.4924 to 1.4926	82.4	17.6
1.4927 to 1.4929	82.5	17.5
1.4930 to 1.4932	82.6	17.4
1.4933 to 1.4934	82.7	17.3
1.4935 to 1.4936	82.8	17.2
1.4937 to 1.4939	82.9	17.1
1.4940 to 1.4941	83.0	17.0
1.4942 to 1.4944	83.1	16.9
1.4945 to 1.4946	83.2	16.8
1.4947 to 1.4949	83.3	16.7
1.4950 to 1.4951	83.4	16.6
1.4952 to 1.4954	83.5	16.5
1.4955 to 1.4957	83.6	16.4
1.4958 to 1.4959	83.7	16.3
1.4960 to 1.4962	83.8	16.2
1.4963 to 1.4964	83.9	16.1
1.4965 to 1.4967	84.0	16.0
1.4968 to 1.4969	84.1	15.9
1.4970 to 1.4972	84.2	15.8
1.4973 to 1.4975	84.3	15.7
1.4976 to 1.4977	84.4	15.6
1.4978 to 1.4980	84.5	15.5
1.4981 to 1.4982	84.6	15.4
1.4983 to 1.4984	84.7	15.3
1.4985 to 1.4987	84.8	15.2
1.4988 to 1.4990	84.9	15.1
1.4991 to 1.4993	85.0	15.0
1.4994 to 1.4995	85.1	14.9
1.4996 to 1.4998	85.2	14.8
1.4999 to 1.5000	85.3	14.7
1.5001 to 1.5003	85.4	14.6
1.5004 to 1.5005	85.5	14.5
1.5006 to 1.5008	85.6	14.4
1.5009 to 1.5011	85.7	14.3
1.5012 to 1.5013	85.8	14.2
1.5014 to 1.5016	85.9	14.1
1.5017 to 1.5018	86.0	14.0
1.5019 to 1.5021	86.1	13.9
1.5022 to 1.5024	86.2	13.8
1.5025 to 1.5026	86.3	13.7
1.5027 to 1.5029	86.4	13.6
1.5030 to 1.5031	86.5	13.5
1.5032 to 1.5034	86.6	13.4
1.5035 to 1.5037	86.7	13.3
1.5038 to 1.5039	86.8	13.2
1.5040 to 1.5042	86.9	13.1
1.5043 to 1.5044	87.0	13.0

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[1] Temperature corrections: If refractometer reading is made at temperatre above 20 °C (68 °F), add 0.00023 to the refractive index for each degree C, or 0.00013 for each degree F. If made below 20 °C (68 °F), subtract correction. The moisture content of honey and equivalent values may be determined by any other method which gives equivalent results.

TABLE IV—FILTERED STYLE

Factors	Grade A	Grade B	Grade C	Substandard
		ANALYTICAL QUALITY		
Percent soluble solids (Minimum).	81.4	81.4	80.0	Fails grade C.
Absence of defects.	Practically free—practically none that affect appearance or edibility.	Reasonably free—do not materially affect the appearance or edibility.	Fairly free—do not seriously affect the appearance or edibility.	Fails grade C.
Score points	37 to 40	34 to 36 [1]	31 to 33 [1]	0 to 30 [1]
Flavor and aroma	Good—free from caramelization, smoke, fermentation, chemicals, and other causes.	Reasonably good—practically free from caramelization; free from smoke, fermentation, chemicals, and other causes.	Fairly good—reasonably free from caramelization; free from smoke, fermentation, chemicals, and other causes.	Poor—Fails grade C.
Score points	45 to 50	40 to 44 [1]	35 to 39 [1]	0 to 34 [1]

TABLE IV—FILTERED STYLE—Continued

Factors	Grade A	Grade B	Grade C	Substandard
Clarity	Clear—may contain air bubbles that do not materially affect the appearance; may contain a trace of pollen grains or other finely divided particles in suspension that do not affect appearance.	Reasonably clear—may contain air bubble, pollen grains, or other finely divided particles in suspension that do not materially affect the appearance.	Fairly clear—may contain air bubbles, pollen grains, or other finely divided particles in suspension that do not seriously affect the appearance.	Fails grade C.
Score points	8 to 10	6 to 7	4 to 5 [1]	0 to 3.[2]

[1] Limiting rule—sample units with score points that fall in this range shall not be graded above the respective grade regardless of the total score.

[2] Partial limiting rule—sample units with score points that fall in this range shall not be graded above U.S. Grade C regardless of the total score.

TABLE V—STRAINED STYLE

Factors	Grade A	Grade B	Grade C	Substandard
		ANALYTICAL QUALITY		
Percent soluble solids (minimum).	81.4	81.4	80.0	Fails grade C.
Absence of defects.	Practically free—practically none that affect appearance or edibility.	Reasonable free—do not materially affect the appearance or edibility.	Fairly free—do not seriously affect the appearance or edibility.	Fails grade C.
Score points	37 to 40	34 to 36 [1]	31 to 33 [1]	0 to 30 [1]
Flavor and aroma	Good—free from caramelization, smoke, fermentation, chemicals, and other causes.	Resasonably good—practically free from carmelization; free from smoke, fermentation, chemicals, and other causes.	Fairly good—reasonably free from caramelization; free from smoke, fermentation, chemicals, and other causes.	Poor—Fails grade C.
Score points	45 to 50	40 to 44 [1]	35 to 39 [1]	0 to 34.[1]

[1] Limiting rule—sample units with score points that fall in this range shall not be graded above the respective grade regardless of the total score.

§ 52.1404 Sample size.

The sample size to determine meeting the requirements of these standards shall be as specified in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83) for lot grading and on-line grading, as applicable.

§ 52.1405 Determining the grade of a lot.

A lot of extracted honey is considered as meeting the requirements for quality and analysis if:

(a) The requirements specified in Table IV and V, as applicable, are met; and

(b) The requirements for the procedures set forth in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83) are met.

Subpart—United States Standards for Grades of Frozen Concentrate for Lemonade

SOURCE: 18 FR 8007, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.1421 Product description.

Frozen concentrate for lemonade is the product prepared from lemon juice and one or more nutritive sweetening ingredients. It may contain added lemon oil or concentrated lemon oil (or their extracts or emulsions) and may or may not contain water in sufficient quantities to standardize the product. The product contains not less than 48.0 percent by weight of soluble solids taken as the sucrose value determined by refractometer and corrected for acidity as given in "Refractometric Determination of Soluble Solids in Citrus Juices," by Stevens and Baier, Industrial and Engineering Chemistry, Analytical Edition, Volume 11, page 447 (1939). The lemon juice is produced from fresh, sound, ripe, and thoroughly cleansed fruit of one or more of the high acid varieties of the species Citrus limon (limonia). Such juice may be fresh or frozen or fresh concentrated or frozen concentrated. The concentrate for lemonade is processed in accordance with good commercial practice and is frozen and maintained at temperatures sufficient for the preservation of the product. If properly labeled any color materials permissible under the provisions of the Federal Food, Drug, and Cosmetic Act may be added.

[24 FR 6239, Aug. 4, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1422 Grades of frozen concentrate for lemonade.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen concentrate for lemonade which mixes readily into a lemonade that possesses an amount of pulp, cloud, and juice sacs so as to substantially reflect the appearance of lemonade prepared from freshly expressed lemon juice; that possesses a good color; that is practically free from defects; that possesses a good flavor; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this section.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen concentrate for lemonade which mixes readily into a lemonade that possesses at least a slight, but not an excessive, amount of pulp, cloud, and juice sacs so as to reasonably reflect the appearance of lemonade prepared from freshly expressed lemon juice; that possesses a reasonably good color; that is reasonably free from defects; that possesses a reasonably good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this section.

(c) "Substandard" is the quality of frozen concentrate for lemonade that fails to meet the requirements of "U.S. Grade B" or "U.S. Choice."

FILL OF CONTAINER

§ 52.1423 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full as practicable with frozen concentrate for lemonade.

FACTORS OF QUALITY

§ 52.1424 Ascertaining the grade.

(a) The grade of frozen concentrate for lemonade is ascertained by considering the requirements with respect to the ease with which the product mixes into a lemonade and to the amount of pulp, cloud and juice sacs present in the lemonade, which factors are not scored, and the factors of color, absence of defects, and flavor which are scored.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Absence of defects	20
Flavor	60
Total score	100

(c) The scores for the factors of color, absence of defects, and flavor are determined immediately after the product has been prepared as lemonade by thoroughly mixing the frozen concentrate for lemonade with a specific volume of water as directed by the manufacturer.

§ 52.1425 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means, 17, 18, 19, or 20 points).

§ 52.1426 Color.

(a) (*A*) *classification.* Frozen concentrate for lemonade which, when prepared as lemonade, possesses a good color may be given a score of 17 to 20 points. "Good color" means a good bright characteristic color that reflects the appearance of lemonade prepared from freshly expressed lemon juice; or, if colored, possesses a bright attractive light-red color typical of colored lemonade.

(b) (*B*) *classification.* If the frozen concentrate for lemonade, when prepared as lemonade, possesses a reasonably good color a score of 14 to 16 points may be given. Frozen concentrate for lemonade that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice," regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means a characteristic color that reflects to a reasonable extent the color of lemonade prepared from freshly expressed lemon juice and is not dark or otherwise discolored for any reason; or, if colored, possesses a reasonably bright color typical of colored lemonade.

(c) (*SStd.*) *classification.* If the lemonade fails to meet the requirements of paragraph (b) of this section, a score of 0 to 13 points may be given. Frozen concentrate for lemonade that falls into this classification shall not be graded above "Substandard," regardless of the total score for the product (this is a limiting rule).

[22 FR 10684, Dec. 25, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1427 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from seeds or portions of seeds, from harmless extraneous material, from objectionable material and from other defects not specifically mentioned that affect the appearance or drinking quality of the product.

(1) "Harmless extraneous material" includes, but is not limited to, embryonic seeds or particles of seeds that measure not more than $^{3}/_{16}$ inch in any dimension, or other similar material which is harmless.

(2) "Seeds or portions of seeds" means any seed or portion thereof, whether or not fully developed, that measures more than $^{3}/_{16}$ inch in any dimension.

(b) (*A*) *classification.* Frozen concentrate for lemonade which, when prepared as lemonade, is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that there may be present not more than an average of 1 seed or portion of seed for each quart of prepared lemonade; and that the appearance and drinking quality of the lemonade is not materially affected by the presence of seeds, portions of seeds, objectionable material, harmless extraneous material, any other defects not specifically mentioned, or any combination thereof.

(c) (*B*) *classification.* If the lemonade is reasonably free from defects a score of 14 to 16 points may be given. Frozen concentrate for lemonade that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice" regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present not more than an average of 2 seeds or portions of seeds for each quart of lemonade; and that the appearance and drinking quality of the lemonade is not seriously affected by the presence of seeds, portions of seeds, objectionable material, harmless extraneous material, any other defects not specifically mentioned, or any combination thereof.

(d) (*SStd.*) *classification.* If the lemonade fails to meet the requirements of paragraph (c) of this section, a score of 0 to 13 points may be given. Frozen concentrate for lemonade that falls into this classification shall not be graded above "Substandard" regardless of the total score for the product (this is a limiting rule).

§ 52.1428 Flavor.

(a) (*A*) *classification.* Frozen concentrate for lemonade which, when prepared as lemonade, possesses a good flavor, may be given a score of 51 to 60 points. "Good flavor" means a fine, distinct, and substantially typical flavor of lemonade prepared from freshly expressed lemon juice and which flavor is free from terpenic, oxidized, rancid, or other off-flavors. To score in this classification, the lemonade shall test not less than 10.5 degrees Brix; shall contain not less than 0.7 gram of acid per 100 ml. of the lemonade; may not contain more than 0.025 ml. of recoverable oil per 100 ml. of the lemonade; and the Brix-acid ratio shall not exceed 20:1.

(b) (*B*) *classification.* If the prepared lemonade possesses a reasonably good flavor, a score of 42 to 50 points may be given. Frozen concentrate for lemonade that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice" regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor" means a fairly typical flavor of lemonade prepared from freshly expressed lemon juice and which flavor is practically free from terpenic, oxidized, rancid, or other off-flavors and is free from abnormal flavors of any kind. To score in this classification the lemonade shall test not less than 10.5 degrees Brix; shall contain not less than 0.7 gram of acid per 100 ml. of the lemonade, may contain not more than 0.035 ml. of recoverable oil per 100 ml. of the lemonade; and the Brix-acid ratio shall not exceed 20:1.

(c) (*SStd*) *classification.* If the prepared lemonade fails to meet the requirements of paragraph (b) of this section, a score of 0 to 41 points may be given. Frozen concentrate for lemonade that falls into this classification shall not be graded above "Substandard" regardless of the total score for the product (this is a limiting rule).

[18 FR 8007, Dec. 9, 1953, as amended at 33 FR 11883, Aug. 22, 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.1429 Definition of terms.

(a) "Brix" means the degrees Brix of the lemonade when tested with a Brix hydrometer calibrated at 20° C. (68° F.). If used in testing lemonade at a temperature other than 20° C. (68° F.) the applicable temperature correction shall be made to the reading of the scale as prescribed in "Official Methods of Analysis of the Association of Official Agricultural Chemists." The degrees Brix of lemonade may be determined by any other method which gives equivalent results.

(b) "Acid" means the grams of acid (calculated as anhydrous citric acid) per 100 ml of the prepared lemonade determined by titration with standard sodium hydroxide solution using phenolphthalein as an indicator.

(c) "Brix-acid ratio" means the ratio between the degrees "Brix" as determined in this section and the acid in grams per 100 ml of lemonade.

(d) "Dilution factor" is the value obtained by dividing a volume of lemonade by the volume of concentrate for lemonade used in its preparation when such lemonade is prepared in accordance with the manufacturer's directions.

§ 52.1430 Explanation of analyses.

Recoverable oil is determined by the following method:

METHOD

(1) *Reagents.*

Standard bromide-bromate solution—prepared and standardized to 0.099N in accordance with Chapter 42, Standard Solutions in the current edition of the AOAC.[1] For use, add 1 volume of standard solution to 3 volumes of water to make 0.0247N solution. 1 ml. of 0.0247N solution supplies bromine to react with 0.00085g., or 0.0010 ml., of *d*-limonene. The solutions are stable for 6 months.

2-Propanol—Reagent grade ACS (American Chemical Society).

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[1] "AOAC" refers to the Official Methods of Analysis published by the Association of Official Analytical (formerly Agricultural) Chemists. Copies may be obtained from the Association at Box 540, Benjamin Franklin Station, Washington, D.C. 20044.

Dilute hydrochloric acid—prepared by adding 1 volume of concentrated acid to 2 volumes of water.

Methyl orange indicator—0.1 percent in water.

(2) *Apparatus.*

Electric heater—with recessed refractory top, 500-750 watts.

Still, all glass—500 ml. distillation flask with 24/40 standard taper neck; 200 mm. Graham condenser with 28/15 receiving socket and drip tip; connecting bulb and adapter as shown in Figure 1.

Burette—10 ml. or 25 ml. graduated to 0.1 ml., with easily controllable flow to permit both rapid and dropwise titration.

(3) *Determination.*

(i) Pipette 25 ml. of well-mixed sample (juice or reconstituted juice) into the distillation flask containing carborundum chips or glass beads, and add 25 ml. of 2-Propanol.

(ii) Distill into a 150 ml. beaker. Continue distilling until solvent ceases to reflux, then remove the flask from the heater.

(iii) Add 10 ml. of dilute hydrochloric acid and 1 drop of indicator. (An alternative method would be to prepare a solution containing 5 ml. of indicator and 1,000 ml. of dilute hydrochloric acid—then add 10 ml. of this acid-indicator mix to the 150 ml. beaker.)

(iv) Titrate with the dilute bromate solution while stirring. The major portion of the titrant may be added rapidly, but the endpoint must be approached at about 1 drop per second. Disappearance of color indicates the endpoint.

(v) Determine the reagent blank by titrating three separate mixtures of 25 ml. 2-Propanol and 10 ml. of dilute hydrochloric acid with indicator—without refilling the burette. Divide the total milliliters of titrant used by three to obtain the average blank. Subtract the average blank thus obtained from the milliliters of titrant used to titrate the distillate.

(vi) Multiply the remainder by 0.004 to obtain the percent recoverable oil by volume in the lemonade.

[33 FR 11883, Aug. 22, 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT INSPECTION AND CERTIFICATION

§ 52.1431 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1432 Score sheet for frozen concentrate for lemonade.

Size and kind of container
Container mark or identification
Label (including dilution factor)
Liquid measure (fluid ounces)
Brix of the lemonade
Anhydrous citric acid in the lemonade (grams per 100 milliliter)
Brix acid ratio
Recoverable oil (milliliter/100 milliliter of the lemonade)
Reconstitutes properly (yes) (no)

Factors			Score points
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd)	[1] 0-13
Absence of defects	20	(A)	17-20
		(B)	[1] 14-16
		(SStd)	[1] 0-13
Flavor	60	(A)	51-60
		(B)	[1] 42-50
		(SStd)	[1] 0-41
Total score	100		

Grade

[1] Indicates limiting rule

Subpart—United States Standards for Grades of Orange Marmalade

SOURCE: 18 FR 8009, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, KINDS, STYLES, TYPES, AND GRADES

§ 52.1451 Product description.

Orange marmalade is the semi-solid or gel-like product prepared from orange fruit ingredients together with one or more sweetening ingredients and may contain suitable food acids, food pectins, lemon juice, or lemon peel. The ingredients are concentrated by cooking to such a point that the soluble solids of the finished marmalade is not less than 65 percent.

[39 FR 40745, Nov. 20, 1974. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1452 Kinds of orange marmalade.

(a) "Sweet orange marmalade" means that the orange fruit ingredient consists principally of such varieties as Navel and Valencia or other commercial dessert varieties other than tangerines. "Sweet orange marmalade" is prepared from not less than 30 parts by weight of orange fruit ingredient to 70 parts by weight of sweetening ingredient.

(b) "Bitter orange marmalade" means that the orange fruit ingredient consists principally of the Seville or sour type of oranges other than tangerines. "Bitter orange marmalade" is prepared from not less than 25 parts by weight of orange fruit ingredient to 75 parts by weight of sweetening ingredient.

(c) "Sweet and bitter orange marmalade" means that the orange fruit ingredient consists of a blend of sweet oranges and bitter oranges other than tangerines. "Sweet and bitter orange marmalade" is prepared from not less than 30 parts by weight of orange fruit ingredient to 70 parts by weight of sweetening ingredient. It is recommended that the orange fruit ingredient from which "Sweet and bitter orange marmalade" is prepared by approximately 50 percent by weight of sweet orange material and bitter orange material.

§ 52.1453 Styles of orange marmalade.

(a) "Sliced" means that the peel in the orange marmalade is in thin strips.

(b) "Chopped" means that the peel in the orange marmalade is in small pieces (such as irregular shapes and dice-like shapes).

§ 52.1454 Types of orange marmalade.

(a) "Type I, Clear" means that the peel is suspended in a translucent semi-solid or gel-like mass.

(b) "Type II, Natural" means that the peel is suspended in a cloudy or opaque semi-solid or gel-like mass.

§ 52.1455 Grades of orange marmalade.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of orange marmalade that is practically free from defects; that possesses a good flavor and odor; and that is of such quality with respect to color and consistency and character as to score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of orange marmalade that possesses a reasonably good color; that possesses a reasonably good consistency and character; that is reasonably free from defects; that possesses a reasonably good flavor and odor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Substandard" is the quality of orange marmalade that fails to meet the requirements of U.S. Grade B or U.S. Choice.

FILL OF CONTAINER

§ 52.1456 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled as full as practicable with orange marmalade and that the product occupy not less than 90 percent of the volume of the container.

FACTORS OF QUALITY

§ 52.1457 Ascertaining the grade.

The grade of orange marmalade is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, consistency and character, absence of defects, and flavor and odor. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Consistency and character	20
Absence of defects	20
Flavor and odor	40
Total score	100

§ 52.1458 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1459 Color.

(a) (*A*) *classification.* Orange marmalade that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the product possesses a practically uniform bright color characteristic of properly prepared and properly processed orange marmalade for the respective kind; that the product is practically free from green-colored peel; and that the product is free from dullness of color due to oxidation or improper processing or improper cooling or other causes.

(b) (*B*) *classification.* If the orange marmalade possesses a reasonably good color, a score of 14 to 16 points may be given. "Reasonably good color" means that the product possesses a reasonably uniform color; that the product is reasonably free from green-colored peel; that the color of the product may be slightly dull but is not off-color nor excessively dark due to oxidation or improper processing or improper cooling or other causes.

(c) (*SStd*) *classification.* Orange marmalade that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1460 Consistency and character.

(a) *General.* The factor of consistency and character refers to the gel strength of the product, the amount and distribution of the peel in the product, the tenderness of the peel, the uniformity of width of slices of peel, and the uniformity of size of small pieces of peel.

(b) (*A*) *classification.* Orange marmalade that possesses a good consistency and character may be given a score of 17 to 20 points. "Good consistency and character" means that the product is a firm but tender gel and may possess no more than a very slight tendency to flow; that the product contains a substantial, but not excessive, amount of peel; that the peel is evenly distributed; that the peel is tender; that in "sliced" style, the thin strips of peel are predominantly of strips approximating 1/32 inch to 1/16 inch in width; and that in "chopped" style, the small pieces of peel are reasonably uniform in size.

(c) (*B*) *classification.* If the orange marmalade possesses a reasonably good consistency and character, a score of 14 to 16 points may be given. "Reasonably good consistency and character" means that the product may be definitely firm but is not excessively gummy nor excessively rubbery or that the product may be viscous but is not excessively thin; that the peel is fairly evenly distributed; that the peel is reasonably tender; that in "sliced" style, the thin strips of peel are predominantly of strips approximating no more than 1/8 inch in width; and that in "chopped" style, the small pieces of peel are fairly uniform in size.

(d) (*SStd*) *classification.* Orange marmalade that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1461 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from seeds or portions of seeds, from blemished peel, from objectionable material, from harmless extraneous material, and from any other defects not specifically mentioned that affect the appearance and eating quality of the product.

(1) "Harmless extraneous material" includes, but is not limited to, small particles of leaves, undeveloped seeds or particles of seeds that measure not more than 3/16 inch in any dimension, or other similar materials that are harmless.

(2) "Seeds or portions of seeds" means any seed or any portion thereof, whether or not fully developed, that measures more than 3/16 inch in any dimension.

(3) "Blemished peel" means pieces of the peel blemished by surface discoloration to the extent that the appearance or eating quality is materially affected.

(b) (*A*) *classification.* Orange marmalade that is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that there may be present on an average for each 16 ounces net weight, not more than 1 seed or portion of seed and not more than 6 pieces of blemished peel; and that in a single container, the appearance and eating quality of the product is not materially affected by the presence of seeds, portions of seeds, blemished peel, objectionable material, harmless extraneous material, any other defects not specifically mentioned, or any combination thereof.

(c) (*B*) *classification.* If the orange marmalade is reasonably free from defects, a score of 14 to 16 points may be given. Orange marmalade that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present on an average for each 16 ounces net weight, not more than a total of 2 seeds or portions of seeds and not more than 10 pieces of blemished peel; and that in a single container, the appearance and eating quality of the product is not seriously affected by the presence of seeds, portions of seeds, blemished peel, objectionable material, harmless extraneous material, any other defects not specifically mentioned, or any combination thereof.

(d) (*SStd*) *classification.* Orange marmalade that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1462 Flavor and odor.

(a) (*A*) *classification.* Orange marmalade that possesses a good flavor and odor may be given a score of 34 to 40 points. "Good flavor and odor" means that the product possesses a good and distinct flavor and aroma characteristic of properly processed orange marmalade for the respective kind; that the flavor of the product is neither excessively tart nor excessively sweet; and that the product is free from any caramelized flavor and is free from objectionable flavor and objectionable odor of any kind.

(b) (*B*) *classification.* If the orange marmalade possesses a reasonably good flavor and odor, a score of 28 to 33 points may be given. Orange marmalade that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor and odor" means that the product possesses a reasonably good flavor characteristic of the orange marmalade for the respective kind; that the flavor of the product may be excessively tart or excessively sweet or may possess a slightly caramelized flavor but that the product is free from objectionable flavor and objectionable odor of any kind.

(c) (*SStd*) *classification.* Orange marmalade that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.1463 Explanation of terms or analyses.

(a) "Orange fruit ingredient" means the edible portions of clean, sound, mature oranges free from material dryness and damage by freezing, including properly prepared orange peel and orange juice but excluding oranges that are artificially colored. Orange fruit ingredients consist of a mixture of cooked orange peel or canned orange peel together with

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fresh, cooked, canned, concentrated, or frozen orange juice or any combination thereof. The orange juice may be strained or filtered or may contain part or all of the cellular or edible fibrous portions of the oranges used.

(b) The "weight of orange fruit ingredient" means:

(1) The weight of orange peel after the removal of waste materials commonly removed therefrom and prior to steaming or cooking or canning and exclusive of any added water, water used in preparation, added sweetening ingredients, lemon peel, or lemon juice;

(2) The weight of orange juice, whether concentrated or not, approximating the average soluble solids of single-strength juice; and

(3) That the proportion by weight of such orange peel to such orange juice approximates not more than the orange peel (exclusive of waste materials commonly removed therefrom) and orange juice from sound, mature oranges free from material dryness and damage by freezing.

(c) "Sweetening ingredients" mean sugar, invert sugar sirup, dextrose, corn sirup, corn sirup solids, glucose sirup, or any mixture thereof.

(d) The "weight of sweetening ingredient" means the weight of the solids of such ingredient or ingredients.

(e) "Soluble solids content" is determined by the method prescribed in the "Official Methods of Analysis of the Association of Official Agricultural Chemists" as outlined under the applicable method for determining the soluble solids in marmalades, except that no correction is made for water-insoluble solids.

LOT INSPECTION AND CERTIFICATION

§ 52.1464 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1465 Score sheet for orange marmalade.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Kind ....
Style ....
Type ....
Soluble solids (% by Refractometer) ....

Factors			Score points
Color	20	(A)	17-20
		(B)	14-16
		(D)	[1] 0-13
Consistency and character.	20	(A)	17-20
		(B)	14-16
		(D)	[1] 0-13
Absence of defects.	20	(A)	17-20
		(B)	[1] 14-16
		(D)	[1] 0-13
Flavor and odor	40	(A)	34-40
		(B)	[1] 28-33
		(D)	[1] 0-27
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Mushrooms

SOURCE: 27 FR 38, Jan. 4, 1962, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, COLOR TYPES, STYLES, AND GRADES

§ 52.1481 Product description.

"Canned mushrooms", as defined in the definitions and standards of identity for canned vegetables (21 CFR 155.201) issued pursuant to the Federal Food, Drug, and Cosmetic Act, means the product prepared from the sound, succulent, fresh mushroom by proper trimming, washing, and sorting and is packed with the addition of water in hermetically sealed containers and sufficiently processed by heat to assure preservation of the product. Salt, or monosodium glutamate, or both may be added in a quantity sufficient to season the product. Ascorbic acid (Vitamin C) may be added in a quantity not to exceed 37.5 milligrams for each ounce of drained weight of mushrooms.

§ 52.1482 Color types of canned mushrooms.

(a) White or cream.

(b) Brown.

§ 52.1483 Styles of canned mushrooms.

(a) "Whole" is the style of canned mushrooms that consists of the caps with attached stems which are more than ⅛ inch in length when measured from the under side of the cap to the cut end of the stem.

(b) "Buttons" is the style of canned mushrooms that consists of the caps with attached stems which are cut transversely below the veil so that in 85 percent or more, by count, of the units the attached stem when measured from the under side of the cap to the cut end of the stem does not exceed ⅛ inch in length; and in the remaining units none of the attached stems may be more than ¼ inch in length.

(c) "Sliced whole" is the style of canned mushrooms that consists of units which have been sliced from whole mushrooms so that in 80 percent or more, by weight, of all the units the direction of the slice is approximately parallel to the longitudinal axis of the stem; and not more than 5 percent, by weight of all the units may be detached portions of stems.

(d) "Random sliced whole" is the style of canned mushrooms that consists of units which have been sliced from whole mushrooms in a random manner so that the direction of the slice may materially deviate from approximately parallel to the longitudinal axis of the stem; and not more than 15 percent, by weight of all the units may be detached portions of stem.

(e) "Sliced buttons" is the style of canned mushrooms that consists of units which have been sliced from button mushrooms so that in 90 percent or more, by weight, of all the units the direction of the slice is approximately parallel to the longitudinal axis of the stem.

(f) "Stems and pieces" or "pieces and stems" (hereinafter referred to as "stems and pieces") is the style of canned mushrooms that consists of units which do not conform to any of the foregoing styles and are predominantly cut or broken portions of the caps and stems and may contain units of any of the foregoing styles.

§ 52.1484 Grades of canned mushrooms.

(a) "U.S. Grade A" or ("U.S. Fancy") is the quality of canned mushrooms that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a good color; that are practically uniform in size and shape, except for the style of "stems and pieces"; that are practically free from defects; that possess a good character, and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That canned mushrooms may be fairly uniform in size and shape for the applicable styles if the total score is not less than 90 points.

(b) "U.S. Grade B" or ("U.S. Extra Standard") is the quality of canned mushrooms that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a fairly good color; that are fairly uniform in size and shape, except for the style of "stems and pieces"; that are fairly free from defects; that possess a fairly good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That canned mushrooms may fail to meet the requirements for U.S. Grade B for the factor of uniformity of size and shape for the applicable styles if the total score is not less than 80 points.

(c) "Substandard" is the quality of canned mushrooms that fail to meet the requirements of U.S. Grade B.

SIZES, FILL OF CONTAINER, AND DRAINED WEIGHTS

§ 52.1485 Sizes of canned mushrooms in the styles of whole and buttons.

(a) No. 0 (Midget) size mushrooms will pass through a round opening ½ inch in diameter.

(b) No. 1 (Tiny) size mushrooms will pass through a round opening ⅝ inch in diameter but will not pass through a round opening ½ inch in diameter.

(c) No. 2 (Small) size mushrooms will pass through a round opening ⅞ inch in diameter but will not pass through a round opening ⅝ inch in diameter.

(d) No. 3 (Medium) size mushrooms will pass through a round opening 1⅛ inches in diameter but will not pass through a round opening ⅞ inch in diameter.

(e) No. 4 (Large) size mushrooms will pass through a round opening 1⅝ inches in diameter but will not pass through a round opening 1⅛ inches in diameter.

(f) No. 5 (Extra Large) size mushrooms are those too large to pass through a round opening 1⅝ inches in diameter.

§ 52.1486 Fill of container for canned mushrooms.

The standard for fill of container for canned mushrooms is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purpose of these grades. The standard of fill of container for canned mushrooms is such that the drained weight of mushrooms is not less than 56 percent of the water capacity of the container if such capacity is less than 11.0 ounces avoirdupois; not less than 59 percent of the water capacity of the container if such capacity is 11.0 ounces or more but less than 25 ounces avoirdupois; and not less than 62 percent of the water capacity of the container if such capacity is 25 ounces avoirdupois or more. Canned mushrooms which do not meet this requirement are "Below Standard in Fill".

§ 52.1487 Minimum drained weights for canned mushrooms.

(a) *General.* The total weight of drained mushrooms (drained weight) shall be not less than that shown for the respective size of containers in Table I of this section.

TABLE I

[Minimum drained weight of canned mushrooms]

Container designation (metal, unless otherwise stated)	Container size overall dimensions		Capacity weight H_2O at 68° F. (ounces)	Minimum drained weight (avoirdupois) (ounces)
	Diameter (inches)	Height (inches)		
2 Z Mushroom	2²/₁₆	2⁴/₁₆	3.57	2.0
2½ Z Glass			4.464	2.5
3 Z Mushroom	2²/₁₆	3⁸/₁₆	5.36	3.0
4 Z Mushroom	2¹¹/₁₆	2¹²/₁₆	7.15	4.0
8 Z Mushroom	3	4	13.55	8.0
Jumbo	3⁷/₁₆	5¹⁰/₁₆	25.70	16.0
No. 10	6³/₁₆	7	109.45	68.0

(b) *Method of ascertaining the drained weight.* The total weight of drained mushrooms is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937−±3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes. The drained weight is the weight of the sieve and mushrooms less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of a No. 3 size can (404 × 700) and smaller and a sieve 12 inches in diameter is used for containers larger than the equivalent of a No. 3 size can.

[27 FR 38, Jan. 4, 1962, as amended at 27 FR 3314, Apr. 7, 1962. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

FACTORS OF QUALITY

§ 52.1488 Ascertaining the grade.

(a) The grade of canned mushrooms is ascertained by considering in conjunction with the requirements of the respective grade the respective ratings for the factors of color, uniformity of size and shape, defects, and character.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	30
Uniformity of size and shape	20
Defects	30
Character	20
Total score	100

(c) "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.1489 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1490 Color.

(a) (*A*) *classification.* Canned mushrooms that possess a good color may be given a score of 27 to 30 points. "Good color" means that the canned mushrooms possess a color that is practically uniform, bright, and typical of canned mushrooms produced from mushrooms of similar varietal characteristics and meet the following additional requirements for the respective color type:

(1) *White or Cream.* The color of the surface of the individual caps or portions thereof is not darker than medium cream, which color may possess a slight tannish cast that does not more than slightly affect the overall color appearance of the units, individually or collectively; and with respect to the styles of sliced buttons, sliced whole, random sliced whole, and stems and pieces, the color of gills of the sliced units is not darker than light tannish gray: *Provided,* That in sliced units the contrast in color between the gills and the surface of the cap of such sliced units does not more than slightly affect the overall color appearance of the product.

(2) *Brown.* The color of the surface of the individual caps is not darker than light brown, which color may possess a slight grayish cast that does not more than slightly affect the overall color appearance; and with respect to the styles of sliced buttons, sliced whole, random sliced whole, and stems and pieces, the color of the gills of the sliced units is not darker than medium brownish gray: *Provided,* That in sliced units the contrast in color between the gills and the surface of the cap of such sliced units does not more than slightly affect the overall color appearance of the product.

(b) (*B*) *classification.* Canned mushrooms that possess a fairly good color may be given a score of 24 to 26 points. Canned mushrooms that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned mushrooms possess a color that is typical of canned mushrooms produced from mushrooms of similar varietal characteristics and that such color may be dull but not to the extent that the appearance of the product is seriously affected; and that the canned mushrooms meet the following additional requirements for the respective color types:

(1) *White or Cream.* The color of the surface of the individual caps may be dark cream, which color may possess a gray or brown cast that does not seriously affect the overall color appearance of the product; and with respect to the styles of sliced buttons, sliced whole, random sliced whole, and stems and pieces, the color of the gills of the sliced units is not darker than tannish gray: *Provided,* That in sliced units the contrast in color between the gills and surface of the cap of such sliced units does not seriously affect the overall color appearance of the product.

(2) *Brown.* The color of the surface of the individual caps may be medium brown in color which color may pos-

sess a grayish cast that does not seriously affect the overall color appearance of the product, and with respect to the styles of sliced buttons, sliced whole, random sliced whole, and stems and pieces, the color of the gills of the sliced units may be dark brownish gray: *Provided*, That in sliced units the contrast in color between the gills and surface of the cap of such sliced units does not seriously affect the overall color appearance of the product.

(c) (*SStd.*) *classification.* Canned mushrooms that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1491 Uniformity of size and shape.

(a) *General.* The factor of uniformity of size and shape for the style of stems and pieces of canned mushrooms is not scored; the other three factors (color, defects, and character, as applicable) are scored and the total multiplied by 100 and divided by 80 dropping any fractions to determine the total score.

(b) *Definition of terms*—(1) *Diameter.* The diameter of a cap in the styles of whole, buttons, sliced whole mushrooms, and sliced buttons means the greatest width of the cap when measured parallel with the under side of the cap.

(2) *Center slice.* "Center slice" in the styles of sliced buttons and sliced whole mushrooms means a unit sliced from a mushroom button or from a whole mushroom approximately parallel to the longitudinal stem axis; possesses two cut surfaces; and measures more than ½ inch in the longest dimension.

(3) *Small side-slice.* "Small side-slice" in the styles of sliced buttons, sliced whole mushrooms, and random sliced whole mushrooms means a slice without attached stem or portion of stem; which possesses only one cut surface; and which measures ½ inch or less in the longest dimension.

(c) (*A*) *classification.* Except in the style of stems and pieces, canned mushrooms that are practically uniform in size and shape may be given a score of 18 to 20 points. "Practically uniform in size and shape" has the following meanings with respect to the applicable styles of canned mushrooms:

(1) *Whole; buttons.* The units are practically uniform in shape; the stems are cut transversely; and the diameter of the cap with the largest diameter does not exceed the diameter of the cap with the smallest diameter by more than ¼ inch; and of all the units in the container, in the 85 percent, by count, with the most uniform diameters, the diameter of the cap with the largest diameter does not exceed the diameter of the cap with the smallest diameter by more than ⅛ inch.

(2) *Sliced whole mushrooms, sliced buttons.* The presence of irregular-shaped units does not materially affect the appearance of the product; not more than 5 percent, by weight, of the units may be small side-slices; and the diameter of the center slice with the largest diameter does not exceed the diameter of the center slice with the smallest diameter by more than ⅛ inch.

(3) *Random sliced whole mushrooms.* Not more than 5 percent, by weight, of all the units may be small side-slices.

(d) (*B*) *classification.* Except in the styles of stems and pieces, canned mushrooms that are fairly uniform in size and shape may be given a score of 16 or 17 points. "Fairly uniform in size and shape" has the following meanings with respect to the applicable styles of canned mushrooms:

(1) *Whole; buttons.* The units are fairly uniform in shape; the stems are cut transversely; and of all the units in the container, in the 85 percent, by count, with the most uniform diameters, the diameter of the cap with the largest diameter does not exceed the diameter of the cap with the smallest diameter by more than ¼ inch.

(2) *Sliced whole mushrooms; sliced buttons.* The presence of irregular shaped units does not seriously affect the appearance of the product; not more than 10 percent, by weight, of the units may be small side-slices; and the diameter of the center slice with

the largest diameter does not exceed the diameter of the center slice with the smallest diameter by more than ⅝ inch.

(3) *Random sliced mushrooms.* Not more than 10 percent, by weight, of the units may be small side-slices.

(e) (*SStd.*) *classification.* Canned mushrooms that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points. Canned mushrooms that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).

§ 52.1492 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from units which are crushed or broken, damaged, or seriously damaged.

(b) *Definitions of terms.* (1) "Crushed or broken unit" with respect to all styles other than the style of "stems and pieces" means a unit that is crushed to the extent so as to destroy its normal shape or that is severed into two or more separate parts.

(2) "Damaged" means damaged by discoloration, pathological injury, mechanical injury, or damaged by other means to such an extent that the appearance or eating quality of the unit is materially affected. Knife marks resulting from the preparation of sliced whole mushrooms, random sliced whole mushrooms, or sliced buttons are not considered mechanical injury.

(3) "Seriously damaged" means damaged to such an extent that the appearance or eating quality of the unit is seriously affected.

(c) (*A*) *classification.* Canned mushrooms that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means:

(1) The product does not exceed the applicable allowances prescribed for the respective type of defect in Table II of this section; and

(2) Notwithstanding the specified allowances, the presence of crushed or broken units in the applicable styles, damaged, and seriously damaged units does not materially affect the appearance or eating quality of the product.

(d) (*B*) *classification.* Canned mushrooms that are fairly free from defects may be given a score of 24 to 26 points. Canned mushrooms that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means:

(1) The product does not exceed the applicable allowances prescribed for the respective type of defect in Table II of this section; and

(2) Notwithstanding the specified allowances, the presence of crushed or broken units in the applicable styles, damaged, and seriously damaged units does not seriously affect the appearance or eating quality of the product.

(e) (*SStd.*) *classification.* Canned mushrooms that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE II

[Summary of allowances for defects]

Grade classification	Maximum allowances		
	All styles except "stems and pieces" crushed or broken	All styles, including—	
		Damaged	Seriously damaged [1]
A	5% by weight	5% by weight	1% by weight
B	10% by weight.	10% by weight.	2% by weight.
SStd	(²)	(²)	(²)

[1] One unit in a container is permitted to be seriously damaged: *Provided,* That the total number of such seriously damaged units in all of the containers comprising the sample is within the percentage permitted for such defect.

[2] Fails to meet foregoing requirements for Grade B classification.

§ 52.1493 Character.

(a) *General.* The factor of character refers to the tenderness and texture of the canned mushrooms and the development of the cap in the styles of "Whole" and "Buttons".

(b) *Definition of closed veil.* "Closed veil" means that the membrane which extends from the inner edge of the cap to the stem practically covers the gills.

(c) (*A*) *classification.* Canned mushrooms that possess a good character may be given a score of 18 to 20 points. "Good character" means that the units are firm and tender; the product is practically free from fibrous or rubbery units; and that with respect to the styles of "Whole" and "Buttons" not less than 95 percent, by weight, of all the units possess closed veils. One unit which fails to meet the requirements for closed veils in the styles of "Whole" and "Buttons" is permitted in a container: *Provided*, That the average for such units in all the containers comprising the sample does not exceed 5 percent, by weight.

(d) (*B*) *classification*. Canned mushrooms that possess a fairly good character may be given a score of 16 or 17 points. Canned mushrooms that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the units are reasonably tender; may be slightly soft; the product is reasonably free from fibrous or rubbery units, and that with respect to the styles of "Whole" and "Buttons" not less than 90 percent, by weight, of all the units possess closed veils. One unit which fails to meet the requirements for closed veils in the styles of "Whole" and "Buttons" is permitted in a container: *Provided*, That the average for such units in all the containers comprising the sample does not exceed 10 percent, by weight.

(e) (*SStd.*) *classification*. Canned mushrooms that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[27 FR 38, Jan. 4, 1962, as amended at 27 FR 3315, Apr. 7, 1962. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT INSPECTION AND CERTIFICATION

§ 52.1494 Ascertaining the grade of a lot.

The grade of a lot of canned mushrooms covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof and Certain Other Processed Food Products (7 CFR §§ 52.1 through 52.87).

SCORE SHEET

§ 52.1495 Score sheet for canned mushrooms.

Size and kind of container ....

Container mark or identification ....

Label ....

Net weight (ounces) ....

Vacuum (inches) ....

Drained weight (ounces) ....

Style ....

Size ....

Color ....

Factors		Score points	
Color	30	(A)	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Uniformity of size and shape.	20	(A)	18-20
		(B)	16-17
		(SStd.)	[2] 0-15
Defects	30	(A)	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Character	20	(A)	18-20
		(B)	[1] 16-17
		(SStd.)	[1] 0-15
Total score	100		

Grade ....

Normal flavor and odor ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Frozen Okra

SOURCE: 34 FR 9697, June 21, 1969, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.1511 Product description.

Frozen okra is the product prepared from the clean, sound, succulent, and edible fresh pods of the okra plant (Hibiscus esculentus) of the green variety. The product is properly prepared and properly processed and is then frozen and stored at temperatures necessary for preservation.

§ 52.1512 Styles of frozen okra.

(a) "Whole okra" consists of trimmed whole pods of any length which may possess an edible portion of the cap. The length of a whole pod is determined by measuring from the outermost point of the tip end of the pod to the outermost point of the stem end of the pod, exclusive of any inedible stem portion which may be present.

(b) "Cut okra" is trimmed whole pods, which may possess an edible portion of cap, and which have been cut transversely into pieces of approximate uniform length. The length of a unit of cut okra is determined by measuring the longitudinal axis of the unit.

§ 52.1513 Grades of frozen okra.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen okra that:

(1) Possesses similar varietal characteristics in all styles;

(2) Has a good flavor and odor;

(3) Has a good color;

(4) Is practically free from defects;

(5) Has a good character; and

(6) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen okra that:

(1) Possesses similar varietal characteristics in the whole style;

(2) May or may not possess similar varietal characteristics in the cut style;

(3) Has a normal flavor and odor;

(4) Has a reasonably good color;

(5) Is reasonably free from defects;

(6) Has a reasonably good character; and

(7) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen okra that fails to meet the requirements of U.S. Grade B.

Factors of Quality

§ 52.1514 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of frozen okra is ascertained by considering the factors of varietal characteristics and flavor and odor which are not scored; the ratings for the factors of color, defects, and character, which are scored; the total score; and the limiting rules which apply.

(b) *Definitions.* (1) "Good flavor" means that the product, before and after cooking, has a good, distinctive flavor and odor, characteristic of young, tender okra and is free from any kind of objectionable flavor or objectionable odor.

(2) "Normal flavor" means that the product, before and after cooking, has a normal, typical flavor and odor, characteristic of properly prepared and processed okra and is free from any kind of objectionable flavor or objectionable odor.

(c) *Sample units.* (1) A "sample unit" of "Whole" okra shall be comprised of 50 pods of okra.

(2) A "sample unit" of "Cut" okra shall be comprised of 10 ounces of okra.

(d) *Evaluating quality factors.* The rating for the factors of color, defects, and character (with respect to pod and seed development), and the evaluation of similar varietal characteristics are determined immediately after thawing to the extent that the product is sufficiently free from ice crystals to permit proper handling as individual units. A representative sample is properly cooked (in sufficient unsalted water) to ascertain the tenderness of the units and freedom from fiber development before final evaluation of character. Flavor and odor is evaluated on both the uncooked and cooked sample.

(e) *Application of percentages.* (1) The term "percent", or the symbol, "%", wherever used in this subpart, means: Percent, by count, in the "Whole" style of frozen okra and percent, by weight, in the "Cut" style of frozen okra.

(f) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Color	30
Defects	40
Character	30
Total score	100

§ 52.1515 Ascertaining the rating of the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example: 27 to 30 points means 27, 28, 29, or 30 points).

§ 52.1516 Color.

(a) (*A*) *Classification.* Frozen okra that possesses a good color may be given a score of 27 to 30 points. "Good color" means that the color of the frozen okra is bright, practically uniform, and typical of the varietal characteristic for young, tender okra. No more than 10 percent of the units in the sample unit may possess a slightly dull color, or possess a slight yellowish-green to brownish-green cast, or vary materially from the overall general, uniform color; and none of the units in the sample unit may possess a noticeable yellow or brown color or be "off color."

(b) (*B*) *Classification.* Frozen okra that possesses a reasonably good color may be given a score of 24 to 26 points. Frozen okra that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the frozen okra possesses a color which may be slightly dull but which is typical of the varietal characteristic for reasonably young and reasonably tender okra. No more than 20 percent of the units in the sample unit may possess a color that is typical of less than reasonably young and reasonably tender okra: *Provided,* That not more than 6 percent of the units in the sample unit may possess a noticeable yellow or brown color or vary markedly from the general, overall color; and none of the units may be "off color."

(c) (*SStd.*) *Classification.* Frozen okra that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1517 Defects.

(a) *Visual aids.* Color print photographs illustrative of certain types of defects defined in this subpart are available for review at specified USDA Processed Products Inspection offices. Information regarding the location of such offices is available upon request from:

Chief, Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, AMS, U.S. Department of Agriculture, Washington, D.C. 20250.

(b) *General.* The factor of defects concerns the degree of freedom from units or any material as may be defined in paragraph (c) of this section or from any other defects present, whether or not specifically defined or listed therein, which would affect the appearance or edibility of the product.

(c) *Definitions of types of defects.* (1) "Insignificantly blemished unit" refers to very slight abnormalities, scars, discolorations, or any other imperfections on the individual unit which may affect the appearance slightly but which do not affect the edibility of the unit.

(2) "Blemished unit" means any unit which is so affected by discoloration or abnormalities, including trimmed or cut surfaces, as to materially affect the appearance of the unit.

(3) "Seriously blemished unit" means any unit which is so affected by discoloration or abnormalities, including trimmed or cut surfaces, as to seriously affect the appearance or edibility of the unit.

(4) "Harmless extraneous material" consists of leaves, attached inedible stems in excess of one-half inch, detached stems of any length, and similar harmless plant material.

(5) "Poorly trimmed" units in the "Whole" style of frozen okra include, but are not limited to:

(i) Apparent untrimmed pods;

(ii) Pods with attached inedible stems of one-half inch or less;

(iii) Pods possessing a conical-shaped or severely biased cut of the cap portion;

(iv) Trimmed pods with cut surface having very ragged edges;

(v) Pods with partially detached cap portions;

(vi) Pods with attached portions of cap that are inedible.

(6) "Poorly trimmed" units in the "Cut" style of frozen okra include, but are not limited to:

(i) Units with attached inedible stems of one-half inch or less;

(ii) Units with portions of cap that are inedible.

(7) "Excessively trimmed" are whole pods that:

(i) Have been so trimmed as to collapse the pod;

(ii) Have been so trimmed as to expose a longitudinal plane of the seed cavity;

(iii) Have been obviously trimmed on both ends.

(8) A "small piece" in "Whole" frozen okra means a piece of pod (exclusive of very small tip ends) which is one-fourth or less the weight of the smallest whole pod in the sample unit.

(9) "Small pieces" or "damaged pieces" in cut frozen okra means pieces of pods one-fourth inch in length or less, or units that may be broken, mashed, split, shattered, or improperly or incompletely cut so as to noticeably affect the appearance or edibility of the unit.

(10) "Damaged by mechanical injury" means whole pods or portions thereof that have been broken, mashed, split, or shattered to the extent that the appearance of the unit is noticeably affected.

(11) "Misshapen units" are whole pods which are seriously deformed.

(12) "Pathological or insect injury" refers to any unit that possesses obvious pathological or insect damage.

(13) "Sand, grit, or silt" means any particle of earthy material.

(d) (*A*) *Classification.* Frozen okra that is practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that:

(1) Any defects present, whether or not specifically defined or listed herein, do not materially detract from the appearance or edibility of the product; and

(2) The defects that may be present in the sample unit do not exceed the allowances specified in table I.

(e) (*B*) *Classification.* Frozen okra that is reasonably free from defects may be given a score of 32 to 35 points. Frozen okra that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) Any defects present, whether or not specifically defined or listed herein, do not seriously detract from the appearance or edibility of the product; and

(2) The defects that may be present in the sample unit do not exceed the allowances specified in table I.

(f) (*SStd.*) *Classification.* Frozen okra that fails to meet the requirements of paragraph (e) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—ALLOWANCES FOR DEFECTS IN FROZEN OKRA

	Whole style (maximum—per 50 pods)		Cut style (maximum—per 10 ounces)	
	Grade A	Grade B	Grade A	Grade B
Blemished units; and seriously blemished units.	3 units, but not more than 1 unit seriously blemished.	6 units, but not more than 2 units seriously blemished.	6 units, but not more than 2 units seriously blemished.	12 units, but not more than 4 units seriously blemished.

TABLE I—ALLOWANCES FOR DEFECTS IN FROZEN OKRA—Continued

	Whole style (maximum—per 50 pods)		Cut style (maximum—per 10 ounces)	
	Grade A	Grade B	Grade A	Grade B
Insignificantly blemished units	Do not more than slightly detract from the appearance.	Do not seriously detract from the appearance.	Do not more than slightly detract from the appearance.	Do not seriously detract from the appearance.
Harmless extraneous material	2 pieces	3 pieces	1 piece	2 pieces.
Poorly trimmed; excessively trimmed; small or damaged units; misshapen units; or any combination of these.	10 units	15 units	12 units	18 units.
Damaged by mechanical injury	5 units	10 units	Not applicable	Not applicable.
Pathological or insect injury	None	1 unit	1 unit	2 units.
Sand, grit, or silt	None	Trace	None	Trace.
Total: All defects above and any other defects or including above.	10 units, do not materially detract from the appearance.	15 units, do not seriously detract from the appearance.	12 units, do not materially detract from the appearance.	18 units, do not seriously detract from the appearance.

§ 52.1518 Character.

(a) *General.* The factor of character refers to the development of the pods and seeds and to the degree of freedom from tough fiber. "Tough fiber" in frozen okra means any cooked unit that contains tough fibrous development to the extent that the eating quality of the unit is materially affected.

(b) (*A*) *Classification.* Frozen okra that possesses a good character may be given a score of 27 to 30 points. "Good character" means that the units are fleshy and tender, that the seeds are in the early stages of maturity, and that not more than 2 whole pods or 4 cut units (as applicable) per sample unit possess tough fibers.

(c) (*B*) *Classification.* Frozen okra that possesses a reasonably good character may be given a score of 24 to 26 points. Frozen okra that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the units may have lost their fleshy texture to a considerable extent, that the units are reasonably tender, that the seeds may have passed the early stages of maturity, and that not more than 4 whole pods or 8 cut units (as applicable) per sample unit possess tough fibers.

(d) (*SStd.*) *Classification.* Frozen okra that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT COMPLIANCE

§ 52.1519 Ascertaining the grade of a lot.

The grade of a lot of frozen okra covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.1520 Score sheet for frozen okra.

Size and kind of container
Container marks or identification
Label
Net Weight (ounces)
Style (whole; cut)
Variety

Factors		Score points	
Color	30	(A)	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Defects	40	(A)	36-40
		(B)	[1] 32-35
		(SStd.)	[1] 0-31
Character	30	(A)	27-30

	(B)	[1] 24-26
	(SStd.)	[1] 0-23
Total score	100	

Flavor and odor ....

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Olive Oil

SOURCE: 18 FR 8014, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.1531 Product description.

Olive oil is the edible oil obtained from the fruit of the olive tree (Olea europaea L.); is clarified, has a specific gravity of 0.910 to 0.915 at 25° C./25° C.; has an iodine number (Hanus) of 79 to 90; has a refractive index of 1.4668 to 1.4683 at 25° C.; and is packed in containers suitable for preservation of the product.

§ 52.1532 Grades of olive oil.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of olive oil that possesses the typical greenish to light yellow color of olive oil; possesses a free fatty acid content, calculated as oleic, of not more than 1.4 percent; is free from defects; and is of such quality with respect to odor and flavor as to score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of olive oil that possesses the typical greenish to light yellow color of olive oil; possesses a free fatty acid content, calculated as oleic, of not more than 2.5 percent; is reasonably free from defects; possesses a reasonably good typical odor; possesses a reasonably good typical flavor; and scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of olive oil that possesses the typical greenish to light yellow color of olive oil; possesses a free fatty acid content, calculated as oleic, of not more than 3.0 percent; is fairly free from defects; possesses a fairly good typical odor; possesses a fairly good typical flavor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U.S. Grade D" or "Substandard" is the quality of olive oil that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.1533 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of olive oil be filled with olive oil as full as practicable without impairment of quality.

FACTORS OF QUALITY

§ 52.1534 Ascertaining the grade.

(a) The grade of olive oil may be ascertained by considering, in addition to the requirements of the respective grade, the following factors: Free fatty acid content, absence of defects, odor, and flavor.

(b) The relative importance of each factor is expressed numerically on a scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Free fatty acid content	30
Absence of defects	30
Odor	20
Flavor	20
Total score	100

§ 52.1535 Ascertaining the rating for each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "27 to 30 points" means 27, 28, 29, and 30 points).

§ 52.1536 Free fatty acid content.

(a) *General.* The free fatty acid content shall be determined in accordance with the method described in the current "Official and Tentative Methods of Analysis of the Association of Official Agricultural Chemists."

(b) (*A*) *classification.* Olive oil that possesses a free fatty acid content of not more than 1.4 percent, calculated as oleic acid, may be given a score of 27 to 30 points.

(c) (*B*) *classification.* If the olive oil possesses a free fatty acid content of more than 1.4 percent but not more than 2.5 percent, calculated as oleic acid, a score of 24 to 26 points may be given. Olive oil that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule).

(d) (*C*) *classification.* If the olive oil possesses a free fatty acid content of more than 2.5 percent but not more than 3 percent, calculated as oleic acid, a score of 21 to 23 points may be given. Olice oil that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule).

(e) (*SStd*) *classification.* Olive oil that contains more than 3 percent free fatty acid, calculated as oleic, may be given a score of 0 to 20 points, and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1537 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from cloudiness at 60° F. due to stearin, and from sediment.

(b) (*A*) *classification.* Olive oil that is free from defects may be given a score of 27 to 30 points. "Free from defects" means that the olive oil is entirely free from the defects mentioned and that no water or other liquid immiscible with the olive oil is present.

(c) (*B*) *classification.* If the olive oil is reasonably free from defects, a score of 24 to 26 points may be given. Olive oil that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the olive oil is reasonably free from the defects mentioned and that no water or other liquid immiscible with the olive oil is present.

(d) (*C*) *classification.* If the olive oil is fairly free from defects, a score of 21 to 23 points may be given. Olive oil that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the defects mentioned may be present but may not impair the quality of the olive oil and that no water or other liquid immiscible with the olive oil is present.

(e) (*SStd*) *classification.* Olive oil that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1538 Odor.

(a) *General.* The factor of odor refers to a typical olive oil odor and the degree of freedom from strong green olive odors, from musty, moldy, butyric, zapatera odors, or any other off-odors.

(b) (*A*) *classification.* Olive oil that possesses a good typical odor may be given a score of 18 to 20 points. "Good typical odor" means that the olive oil has a typical olive oil odor and is practically free from off-odors of any kind.

(c) (*B*) *classification.* If the olive oil possesses a reasonably good typical odor, a score of 16 to 17 points may be given. "Reasonably good typical odor" means that the olive oil has a typical olive oil odor and is reasonably free from off-odors of any kind.

(d) (*C*) *classification.* If the olive oil possesses a fairly good typical odor, a score of 14 or 15 points may be given. "Fairly good typical odor" means that the olive oil has a typical olive oil odor and is fairly free from off-odors of any kind. Olive oil that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regard-

less of the total score for the product (this is a limiting rule).

(e) *(SStd) classification.* Olive oil that fails to meet the requirements of paragraph (d) of this section and that possesses a definite musty moldy, butyric, or zapatera odor or any other definitely objectionable odor may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1539 Flavor.

(a) *General.* The factor of flavor refers to the typical olive oil flavor and the degree of freedom from strong green olive flavors, from musty, moldy, butyric, zapatera, rancid, or any other off-flavors.

(b) *(A) classification.* Olive oil that possesses a good typical flavor may be given a score of 18 to 20 points. "Good typical flavor" means that the olive oil has a typical olive oil flavor and is practically free from off-flavors of any kind.

(c) *(B) classification.* If the olive oil possesses a reasonably good typical flavor, a score of 16 or 17 points may be given. "Reasonably good typical flavor" means that the olive oil has a typical olive oil flavor and is reasonably free from off-flavors of any kind.

(d) *(C) classification.* If the olive oil possesses a fairly good typical flavor, a score of 14 or 15 points may be given. "Fairly good flavor" means that the olive oil has a typical olive oil flavor and is fairly free from off-flavors of any kind. Olive oil that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule).

(e) *(SStd) classification.* Olive oil that fails to meet the requirements of paragraph (d) of this section and that possesses a definite musty, moldy, butyric, zapatera, or rancid flavor or any other definitely objectionable flavor may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1540 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1541 Score sheet for olive oil.

The following score sheet may be used to summarize the factors determining the various grades:

Size and kind of container
Container code or marking
Label
Contents (liquid measure)

Factors			Score points
Free fatty acid content	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(D)	[1] 0-20
Absence of defects	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(D)	[1] 0-20
Odor	20	(A)	18-20
		(B)	16-17
		(C)	[1] 14-15
		(D)	[1] 0-13
Flavor	20	(A)	18-20
		(B)	16-17
		(C)	[1] 14-15
		(D)	[1] 0-13
Total score	100		

Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Orange Juice

Source: 47 FR 55457, Dec. 10, 1982, unless otherwise noted.

§ 52.1551 Product description.

(a) For the purpose of these standards the following products are represented as defined in the Standards of

Identity issued under the Federal Food, Drug, and Cosmetic Act.

(1) "Pasteurized orange juice" (21 CFR 146.140).

(2) "Canned orange juice" (21 CFR 146.141).

(3) "Orange juice from concentrate" (21 CFR 146.145).

(4) "Frozen concentrated orange juice" (21 CFR 146.146).

(5) "Reduced acid frozen concentrated orange juice" (21 CFR 146.148).

(6) "Canned concentrated orange juice" (21 CFR 146.150).

(7) "Concentrated orange juice for manufacturing" (21 CFR 146.153 and 21 CFR 146.154).

(b) For the purpose of these standards the following product is not defined in the Standards of Identity issued under the Federal Food, Drug, and Cosmetic Act. The product is defined as follows: "Dehydrated orange juice" is the product made from any of the products listed in paragraph (a) of this section. Optional functional ingredient(s) permissible under the Federal Food, Drug, and Cosmetic Act may be used. The dehydrated orange juice is reduced to a suitable moisture content necessary for preservation.

§ 52.1552 Styles.

(a) Unsweetened.

(b) Sweetened (not applicable to reduced acid frozen concentrated orange juice).

§ 52.1553 Definitions of terms.

In these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Acid* means the percent, by weight, of total acidity (calculated as anhydrous citric acid).

(b) *Appearance* means the physical properties of orange juice which are evaluated by the human eye.

(c) *Brix* means the total soluble solids as determined when tested with a Brix hydrometer and applying the applicable temperature correction. The Brix may be determined by any other method that gives equivalent results.

(d) *Brix/acid ratio* means the ratio of the degrees Brix of the juice to the grams of anhydrous citric acid per 100 grams of the juice.

(e) *Brix value* means the refractometric sucrose value determined in accordance with the "International Scale of Refractive Indices of Sucrose Solutions" and to which the applicable correction for acid is added. The Brix value is determined in accordance with the refractometric method outlined in the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(f) *Brix value/acid ratio* means the ratio of the Brix value of the concentrate, in degrees Brix, to the grams of anhydrous citric acid per 100 grams of concentrate.

(g) *Coagulation* means curdling of orange juice.

(h) *Color.* The color of the orange juice is evaluated by comparing the color of the juice with the USDA orange Juice Color Standards as points of reference.

(i) *Color standards* means the official USDA Orange Juice Color Standards. The availability and procedure for using the color standards may be obtained from: Chief, Processed Products Branch, Fruit and Vegetable Division, AMS, U.S. Department of Agriculture, Washington, D.C. 20250.

Any device approved by the USDA which gives values equivalent to the USDA Color Standards may be used.

(j) *Defects* means juice cells, pulp, seeds or portions of seeds, specks, particles of membrane, core, peel, or any other distinctive features that adversely affect the appearance or drinking quality of the orange juice.

(1) *Practically free from defects* means defects in excess of that normally expected in orange juice are not present.

(2) *Reasonably free from defects* means the presence of defects does not seriously affect the appearance or drinking quality of the orange juice.

(k) *Flavor.* The flavor is evaluated based upon characteristics normal to each type of product.

(1) *Very good flavor* means that the flavor is fine, distinct, and substantially typical of orange juice extracted from fresh mature sweet oranges and is free from off flavors of any kind.

(2) *Good flavor* means the flavor is similar to the flavor of juice extracted from fresh mature sweet oranges. The orange juice may be slightly affected by processing, packaging, or storage conditions.

(3) *Poor flavor* means orange juice that fails the requirements for "good flavor."

(m) *Reconstituted juice* means the product obtained by thoroughly mixing the concentrate with the amount of water prescribed on the label or other appropriate directions.

(n) *Reconstitutes properly* means that, upon mixing with water, the concentrate dissolves readily and has no material coagulation or separation.

(o) *Recoverable oil* means the volume of oil that may be recovered from orange juice as determined by the "Methods of Analysis of the Association of Official Analytical Chemists."

(p) *Sample unit* means a portion of orange juice selected for grading.

(q) *Separation* means that the lighter suspended material rises and heavier suspended material sinks resulting in a zone of clear or transparent liquid.

§ 52.1554 Recommended sample unit size.

The requirements for all factors of quality are based on the following:

(a) The entire contents of a container;

(b) A representative portion of the contents of a container;

(c) Combination of the contents of two or more containers; or

(d) A portion of unpacked product.

§ 52.1555 Grades.

(a) *U.S. Grade A* is the quality of orange juice that meets the applicable requirements of Tables I-VIII;

(b) *U.S. Grade B* is the quality of orange juice that meets the applicable requirements of Tables I-VIII;

(c) *Substandard* is the quality of orange juice that fails to meet the requirements for "Grade B."

§ 52.1556 Factors of quality and analysis.

The grade of a lot of product is based on observation and analysis of the orange juice for the following applicable quality and analytical factors:

(a) *Quality:*

(1) Appearance;

(2) Coagulation;

(3) Color;

(4) Defects;

(5) Flavor;

(6) Reconstitution;

(7) Separation; and

(8) Total score points.

(b) *Analytical:*

(1) Acid;

(2) Brix measurement or Brix value measurement;

(3) Brix/acid ratio or Brix value/acid ratio; and

(4) Recoverable oil.

§ 52.1557 Standards for Grades of Orange Juice.

Table I - Canned Orange Juice

Factors	Grade A				Grade B			
Quality:								
Coagulation.	None.				Slight.			
Color.	Good. (Equal to or better than USDA OJ 6.)				Reasonably good. (Not as good as USDA OJ 6, but not off color.)			
Score Points	36 - 40.				32 - 35.			
Defects.	Practically free.				Reasonably free.			
Score Points	18 - 20.				16 - 17.			
Flavor.	Very Good.				Good.			
Score Points	36 - 40.				32 - 35.			
Total Score Points.	Minimum - 90.				Minimum - 80.			
Analytical:	Unsweetened		Sweetened		Unsweetened		Sweetened	
Brix: Minimum.	10.5°		10.5°		10.0°		10.5°	
Soluble Orange solids, exclusive of sweetener (percent by weight of finished product): Minimum.			10.5				10.0	
Brix/Acid Ratio:	Min	Max	Min	Max	Min	Max	Min	Max
Brix < 11.5°	10.5:1	20.5:1			9.5:1	20.5:1		
Brix 11.5° or more.	9.5:1	20.5:1			9.5:1	20.5:1		

Table I - Canned Orange Juice (Continued)

Factors	Grade A				Grade B			
Analytical:	Unsweetened		Sweetened		Unsweetened		Sweetened	
	Min	Max	Min	Max	Min	Max	Min	Max
Brix < 15°			12.5:1	20.5:1			12.5:1	20.5:1
Brix 15° or more.			9.5:1	20.5:1			9.5:1	20.5:1
Acid (wt/100g):								
California/ Arizona.	0.70g	1.40g	0.70g	1.40g	0.55g	1.55g	0.60g	1.60g
Outside California/ Arizona.	0.60g	1.40g	0.60g	1.40g	0.55g	1.55g	0.60g	1.60g
Recoverable Oil (percent by volume): Maximum	0.035		0.035		0.055		0.055	

Table II - Frozen Concentrated Orange Juice

Factors	Grade A	Grade B
Quality: 1/		
Appearance.	Fresh orange juice.	Fresh orange juice.
Reconstitution.	Reconstitutes properly.	Reconstitutes properly.
Color.	Very Good. (Equal to or better than USDA OJ 5.)	Good. (Not as good as USDA OJ 5, but not off color.)
Score points	36 - 40.	32 - 35.

Defects.	Practically free.				Reasonably free.			
Score points	18 - 20.				16 - 17.			
Flavor.	Very Good.				Good.			
Score points	36 - 40.				32 - 35.			
Total Score Points.	Minimum - 90.				Minimum - 80.			
Analytical:								
	Unsweetened		Sweetened		Unsweetened		Sweetened	
Concentrate:								
Brix value: Minimum.	41.8°		42.0°		41.8°		42.0°	
Brix value/Acid Ratio:	Min	Max	Min	Max	Min	Max	Min	Max
California/ Arizona.	11.5:1	19.5:1	12.0:1	19.5:1	10.0:1		10.0:1	
Outside California/ Arizona.	12.5:1	19.5:1	13.0:1	19.5:1	10.0:1		10.0:1	
Reconstituted Juice:								
Brix: Minimum.	11.8°				11.8°			
Soluble Orange Solids, exclusive of sweetener (percent by weight of finished product): Minimum.			11.8				11.8	
Recoverable Oil (percent by volume): Maximum.	0.035				0.040			

1/ Reconstituted prior to grading

Table III - Reduced Acid Frozen Concentrated Orange Juice

Factors	Grade A	Grade B
Quality: 1/		
Appearance.	Fresh orange juice.	Fresh orange juice.
Reconstitution.	Reconstitutes properly.	Reconstitutes properly.
Color.	Very good. (Equal to or better than USDA OJ 5.)	Good. (Not as good as USDA OJ 5, but not off color.)
Score Points.	36 - 40	32 - 35
Defects.	Practically free.	Reasonably free.
Score Points.	18 - 20	16 - 17
Flavor.	Very good.	Good.
Score Points.	36 - 40	32 - 35
Total Score Points.	Minimum - 90.	Minimum - 80.
Analytical:		
Concentrate:		
Brix value: Minimum.	41.8°	41.8°
Brix value/Acid Ratio.	Min 21.0:1 Max 26.0:1	Min 21.0:1 Max 26.0:1
Reconstituted Juice:		
Brix: Minimum.	11.8°	11.8°
Recoverable Oil (percent by volume): Maximum	0.035	0.040

1/ Reconstituted prior to grading.

Table IV - Concentrated Orange Juice for Manufacturing

Factors	Grade A		Grade B	
Quality: 2/				
Reconstitution.	Reconstitutes properly.		Reconstitutes properly.	
Color.	Good. (Equal to or better than USDA OJ 6.)		Reasonably good. (Not as good as USDA OJ 6, but not off color)	
Score Points.	36 - 40.		32 - 35.	
Defects.	Practically free.		Reasonably free.	
Score Points.	18 - 20.		16 - 17.	
Flavor.	Very Good.		Good.	
Score Points.	36 - 40.		32 - 35.	
Total Score Points.	Minimum - 90.		Minimum - 80.	
Analytical:				
Soluble Orange solids, exclusive of sweetener (percent by weight of finished product): Minimum.	11.8		11.8	
Brix value/Acid Ratio.	Min 8.0:1	Max 24.0:1	Min 8.0:1	Max 24.0:1

2/ Reconstituted to 11.8° Brix prior to grading.

Table V - Canned Concentrated Orange Juice

Factors	Grade A		Grade B	
Quality: 1/				
Appearance.	Reasonably characteristic of fresh orange juice.		Fairly characteristic of fresh orange juice.	
Reconstitution.	Reconstitutes properly.		Reconstitutes properly.	
Color.	Very Good. (Equal to or better than USDA OJ 5.)		Good. (Not as good as USDA OJ 5, but not off color)	
Score Points	36 - 40.		32 - 35.	
Defects.	Practically free.		Reasonably free.	
Score Points	18 - 20.		16 - 17.	
Flavor.	Very Good		Good.	
Score Points	36 - 40.		32 - 35.	
Total Score Points.	Minimum - 90.		Minimum - 80.	
Analytical:				
Concentrate:	Unsweetened	Sweetened	Unsweetened	Sweetened
Brix value: Minimum	41.8°	42.0°	41.8°	42.0°
Brix/Acid Ratio.	Max 11.5:1 Min 20.0:1	Max 12.0:1 Min 20.0:1	Min 9.5:1 Max 20.0:1	Min 10.0:1 Max 20.0:1
Reconstituted Juice:				
Brix: Minimum.	11.8°		11.8°	
Soluble Orange Solids, exclusive of sweetener (percent by weight of finished product): Minimum.		11.8		11.8
Recoverable Oil (percent by volume): Maximum	0.035		0.040	

1/ Reconstituted prior to grading.

Table VI - Dehydrated Orange Juice

Factors	Grade A	Grade B
Quality: 2/		
Appearance.	Reasonably characteristic of fresh orange juice.	Fairly characteristic of fresh orange juice.
Reconstitution.	Reconstitutes properly.	Reconstitutes properly.
Color.	Good. (Equal to or better than USDA OJ 6.)	Reasonably Good. (Not as good as USDA OJ 6, but not off color.)
Score Points	36 - 40.	32 - 35.
Defects.	Practically free.	Reasonably free.
Score Points	18 - 20.	16 - 17.
Flavor.	Very Good.	Good.
Score Points	36 - 40.	32 - 35.
Total Score Points	Minimum - 90.	Minimum - 80.
Analytical: 3/		
Brix: Minimum.	11.8°	11.8°
Brix/Acid Ratio.	Min 12.0:1 Max 18.0:1	Min 10.5:1 Max 19.0:1
Soluble Orange Solids, exclusive of sweetener (percent by weight of Reconstituted Juice): Minimum.	11.8	11.8
Recoverable Oil (percent by volume): Maximum	0.035	0.045

2/ Reconstituted to 11.8° Brix prior to grading.

3/ Reconstituted by label directions prior to analysis.

Table VII - Pasteurized Orange Juice

Factors	Grade A				Grade B			
Quality:								
Appearance.	Fresh orange juice.				Fresh orange juice.			
Coagulation.	None.				None.			
Separation.	No material.				Some.			
Color.	Very good. (Not as good as OJ 5 but much better than OJ 6)				Good. (Fails Grade A, but not off color.)			
Score Points	36 - 40.				32 - 35.			
Defects.	Practically free.				Reasonably free.			
Score Points	18 - 20.				16 - 17.			
Flavor.	Very Good.				Good.			
Score Points	36 - 40.				32 - 35.			
Total Score Points.	Minimum - 90.				Minimum - 80.			
Analytical:								
	Unsweetened		Sweetened		Unsweetened		Sweetened	
Brix: Minimum.	11.0°		11.0°		10.5°		10.5°	
Soluble Orange Solids, exclusive of sweetener (percent by weight of finished product): Minimum.			11.0				10.5	
Brix/Acid Ratio:	Min	Max	Min	Max	Min	Max	Min	Max
California/ Arizona.	11.5:1	18.0:1	12.5:1	20.5:1	10.5:1	23.0:1	10.5:1	23.0:1
Outside California/ Arizona.	12.5:1	20.5:1	12.5:1	20.5:1	10.5:1	23.0:1	10.5:1	23.0:1
Recoverable Oil (percent by volume): Maximum	0.035				0.045			

Table VIII - Orange Juice from Concentrate

Factors	Grade A				Grade B			
Quality:								
Appearance.	Fresh orange juice.				Fresh orange juice.			
Coagulation.	None.				None.			
Separation.	No material.				Some.			
Color.	Very Good. (Equal to or better than USDA OJ 5.)				Good. (Not as good as USDA OJ 5, but not off color.)			
Score Points	36 - 40.				32 - 35.			
Defects.	Practically free.				Reasonably free.			
Score Points	18 - 20.				16 - 17.			
Flavor.	Very Good.				Good.			
Score Points	36 - 40.				32 - 35.			
Total Score Points.	Minimum - 90.				Minimum - 80.			
Analytical:	Unsweetened		Sweetened		Unsweetened		Sweetened	
Brix: Minimum.	11.8°		11.8°		11.8°		11.8°	
Soluble Orange Solids, exclusive of sweetener (percent by weight of finished product): Minimum.			11.8				11.8	
Brix/Acid Ratio:	Min	Max	Min	Max	Min	Max	Min	Max
California/ Arizona.	11.5:1	18.0:1	12.5:1	20.5:1	11.0:1	23.0:1	11.0:1	23.0:1
Outside California/ Arizona.	12.5:1	20.5:1	12.5:1	20.5:1	11.0:1	23.0:1	11.0:1	23.0:1
Recoverable Oil (percent by volume): Maximum	0.035				0.045			

[47 FR 55457, Dec. 10, 1982; 47 FR 57907, Dec. 29, 1982; 48 FR 8985, Mar. 3, 1983]

§ 52.1558 Sample size.

The sample size to determine acceptance with the requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83).

§ 52.1559 Lot requirements.

A lot of orange juice is considered as meeting requirements for quality if:

(a) The requirements specified in Tables I, II, III, IV, V, VI, VII, and VIII, as applicable, are met; and

(b) The sampling plans and procedures in 7 CFR 52.1-52.83 are met.

Subpart—United States Standards for Grades of Canned Pears

SOURCE: 38 FR 13330, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, GRADES

§ 52.1611 Product description.

(a) "Canned pears" means the canned product prepared from properly prepared, mature pears, as such product is purported to be in the standards of identity for canned pears (21 CFR 145.175(a); 145.176) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(b) For the purposes of the standards in this subpart, the canned pears are peeled and the term "canned pears" includes "canned pears", "canned spiced pears", and "canned artificially sweetened pears" as defined in the aforesaid standards of identity.

§ 52.1612 Styles.

(a) "Halves" or "halved" are peeled pears, with cores and stems removed, cut longitudinally from stem to calyx into approximate halves.

(b) "Quarters" or "quartered" are peeled pears, with cores and stems removed, cut longitudinally from stem to calyx into approximate quarters.

(c) "Slices" or "sliced" are peeled pears, with cores and stems removed, cut longitudinally from stem to calyx into approximate equal segments smaller than quarters.

(d) "Dice" or "diced" canned pears are peeled pears, with cores and stems removed, cut into approximate cubes.

(e) "Whole" canned pears are peeled, cored, or uncored, whole pears with or without stems removed.

(f) "Pieces or irregular pieces" are peeled and cored pears that are irregular in shapes and sizes.

[41 FR 15019, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1613 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy"), is the quality of halves, quarters, slices, diced, or whole canned pears that:

(1) Possess similar varietal characteristics;

(2) Possess a normal flavor and odor;

(3) Possess a good color;

(4) Are practically uniform in size and symmetry;

(5) Are practically free from defects;

(6) Possess a good character; and

(7) For those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points;

(8) *Provided,* That halves, quarters, slices, diced, or whole pears may possess a reasonably good color and may be fairly uniform or reasonably uniform in size and symmetry, if the total score is not less than 90 points.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes of canned pears that:

(1) Possess similar varietal characteristics;

(2) Possess a normal flavor and odor;

(3) Possess a reasonably good color;

(4) Are reasonably uniform in size and symmetry for the applicable style;

(5) Are reasonably free from defects;

(6) Possess a reasonably good character; and

(7) For those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points;

(8) *Provided*, That halves, quarters, slices, diced, or whole canned pears may be fairly uniform in size and symmetry, if the total score is not less than 80 points.

(c) "U.S. Grade C" (or "U.S. Standard"), is the quality of halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes of canned pears that:

(1) Possess a normal flavor and odor;

(2) Possess a fairly good color;

(3) Are fairly uniform in size and symmetry for the applicable style;

(4) Are fairly free from defects;

(5) Possess a fairly good character; and

(6) For those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(d) "Substandard" is the quality of canned pears that fail to meet the applicable requirements of U.S. Grade C and is the quality of canned pears that may or may not meet the minimum standard of quality for canned pears issued pursuant to the Federal Food, Drug, and Cosmetic Act.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.1614 Liquid media and Brix measurements.

"Cutout" requirements for liquid media in canned pears are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The designations of liquid packing media and the Brix measurements, where applicable, are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s)".	22° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)".	18° or more but less than 22°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)".	14° or more but less than 18°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)".	Less than 14°.
"In water"	Not applicable.
"In fruit juice(s) and water"	Do.
"In fruit juice(s)"	Do.
"In clarified juice"	Do.
"Artificially sweetened"	Do.

[38 FR 13330, May 21, 1973, as amended at 41 FR 15019, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1615 Fill of container.

The standard of fill of container for canned pears is the maximum quantity of the pear units which can be sealed in the container and processed by heat to prevent spoilage, without crushing or breaking such ingredient. Canned pears that do not meet this requirement are "Below Standard in Fill."

§ 52.1616 Recommended drained weights.

(a) *General.* (1) The minimum drained weight recommendations for the various applicable styles in table I of this subpart are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for ascertaining drained weight.* The drained weight of canned pears is determined by emptying the contents of the container, turning the seed cavities down in halves, upon a U.S. Standard No. 8 circular sieve, of proper diameter, containing 8 meshes to the inch (0.0937-inch±3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and pears less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 x 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definitions of symbols.* (1) $\mathbf{X}_d$—The average drained weight of all the sample units in the sample.

(2) *LL*—Lower limit for drained weights of individual sample units.

(d) *Compliance with recommended drained weights.* A lot of canned pears is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended average drained weight (designated as X_d), in tables I, II, and III; and

(2) The number of sample units which fail to meet the recommended minimum drained weight for individuals (designated as *LL*) in tables I, II, and III does not exceed the applicable acceptance number specified in the single sampling plan of table IV.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED PEARS

[Styles of quarters; slices, mixed pieces of irregular sizes and shapes]

Container designation (metal, unless otherwise stated)	Container size (overall dimensions)		Over-flow capacity (fluid ounces)	In any sirup or other liquid medium (ounces)	
	Diameter (in.)	Height (in.)		LL	X_d
5Z	211	200		2.6	3.0
5Z	211	202		2.9	3.3
6Z	300	200		3.3	3.7
7Z	211	212		3.8	4.2
8Z glass			8.2	4.4	4.8
8Z tall	211	304		4.5	4.9
No. 300	300	407		8.3	8.9
No. 303 glass			17.0	8.8	9.4
No. 303	303	406		9.0	9.6
No. 2	307	409		11.1	11.8
No. 2½ glass			28.35	16.1	16.9
No. 2½	401	411		16.4	17.2
No. 10	603	700		64.0	65.5

TABLE II—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED PEARS

[Halves style]

Container designation (metal, unless otherwise stated)	In any sirup or other liquid medium (ounces)	
	LL	X_d
8Z glass	4.1	4.7
8Z tall	4.2	4.8
No. 300:		
7 count or less	7.7	8.4
8 count or more	8.0	8.7
No. 303 glass:		
7 count or less	8.2	9.0
8 count or more	8.5	9.3
No. 303:		
7 count or less	8.5	9.3
8 count or more	8.8	9.6
No. 2:		
7 count or less	10.5	11.4
8 count or more	10.8	11.7
No. 2½ glass:		
8 count or less	14.9	16.0
9 count or more	15.4	16.5
No. 2½:		
8 count or less	15.3	16.4
9 count or more	15.8	16.9
No. 10:		
25 count or less	60.8	62.7
26 count or more	62.2	64.1

TABLE III—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED PEARS

[Diced style]

Container designation (metal, unless otherwise stated)	In any sirup or other liquid medium (ounces)	
	LL	X_d
5Z	2.8	3.1
5Z	3.0	3.3
6Z	3.5	3.8
7Z	4.3	4.6
8Z glass	5.3	5.6
8Z tall	5.3	5.6
No. 300	9.3	9.7
No. 303 glass	10.1	10.6
No. 303	10.2	10.7
No. 2	12.4	13.0
No. 2½ glass	18.2	18.8
No. 2½	18.4	19.0
No. 10	65.7	67.0

TABLE IV—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29	38	48	60	72
Acceptance No.	0	1	2	3	4	5	6	7	8

§ 52.1617 Recommended fill weights.

(a) *General.* The minimum fill weight recommendations for the various applicable styles in tables V, VI, and VII of this subpart are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining fill weight.* The fill weight of canned pears for the applicable styles is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X_{min}—means the minimum lot average fill weight.

LWL$_{\bar{x}}$—means the lower warning limit for subgroup averages.

LRL$_{\bar{x}}$—means the lower reject limit for subgroup averages.

LWL—means the lower warning limit for individual fill weight measurements.

LRL—means the lower reject limit for individual fill weight measurements.

R'—means a specified average range value.

R_{max}—means a specified maximum range for a subgroup.

"Sampling allowance code" means a letter on the sampling allowance chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Subgroup size.* The subgroup size for the determination of fill weights shall be 5 sample units.

(e) *Compliance with recommended fill weights.* Compliance with the recommended fill weights for canned pears shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE V—RECOMMENDED FILL WEIGHTS FOR CANNED PEARS

[Halves style (ounces)]

Container designation (metal, unless otherwise designated)	X_{min}	4LWL$_{\bar{x}}$	LRL$_{\bar{x}}$	6LWL	LRL	R'	R_{max}	Sampling allowance code
8Z tall	5.1	4.6	4.4	4.1	3.6	1.2	2.5	L.
No. 300:								
7 count or less	8.8	8.2	7.9	7.5	6.8	1.5	3.2	L.
8 count or more	9.1	8.5	8.2	7.8	7.1	1.5	3.2	L.
No. 303 glass:								
7 count or less	9.5	8.9	8.5	8.1	7.4	1.6	3.4	M.
8 count or more	9.8	9.2	8.8	8.4	7.7	1.6	3.4	M.
No. 303:								
7 count or less	9.8	9.2	8.8	8.4	7.7	1.6	3.4	M.
8 count or more	10.1	9.5	9.1	8.7	8.0	1.6	3.4	M.
No. 2:								
7 count or less	11.8	11.1	10.7	10.2	9.4	1.9	3.9	O.
8 count or more	12.3	11.6	11.2	10.7	9.9	1.9	3.9	O.
No. 2½ glass:								
8 count or less	16.8	15.9	15.4	14.8	13.8	2.3	4.9	S.
9 count or more	17.3	16.4	15.9	15.3	14.3	2.3	4.9	S.
No. 2½:								
8 count or less	17.2	16.3	15.8	15.2	14.2	2.3	4.9	S.
9 count or more	17.7	16.8	16.3	15.7	14.7	2.3	4.9	S.
No. 10:								
25 count or less	66.0	64.5	63.7	62.6	60.9	4.0	8.4	Z.
26 count or more	67.5	66.0	65.2	64.1	62.4	4.0	8.4	Z.

TABLE VI—RECOMMENDED FILL WEIGHTS FOR CANNED PEARS

[Styles of quarters; slices; mixed pieces of irregular sizes and shapes (ounces)]

Container designation (metal, unless otherwise stated)	X_{min}	LWL_1	LRL_1	LWL	LRL	R'	R_{max}	Sampling allowance code
6Z	3.2	2.8	2.6	2.4	2.0	0.90	2.0	G.
5Z	3.5	3.1	2.9	2.7	2.3	.90	2.0	G.
5Z	4.0	3.6	3.4	3.2	2.8	.90	2.0	G.
7Z	4.6	4.2	4.0	3.8	3.4	.90	2.0	G.
8Z glass	5.1	4.7	4.5	4.3	3.9	.90	2.0	G.
8Z tall	5.2	4.8	4.6	4.4	4.0	.90	2.0	G.
No. 300	9.4	8.9	8.7	8.4	7.9	1.2	2.5	I.
No. 303 glass	10.0	9.5	9.2	8.9	8.3	1.3	2.7	J.
No. 303	10.2	9.7	9.4	9.1	8.5	1.3	2.7	J.
No. 2	12.6	12.0	11.7	11.3	10.6	1.5	3.2	L.
No. 2½ glass	18.0	17.3	17.0	16.5	15.7	1.7	3.7	N.
No. 2½	18.3	17.6	17.3	16.8	16.0	1.7	3.7	N.
No. 10	70.0	68.7	68.1	67.2	65.8	3.3	6.9	W.

Table VII—Recommended Fill Weight Values for Canned Pears

[Diced style (ounces)]

Container designation (metal, unless otherwise stated)	X_{min}	LWL_1	LRL_1	LWL	LRL	R'	R_{max}	Sampling allowance code
5Z	3.3	3.1	2.9	2.8	2.5	0.60	1.20	D.
5Z	3.6	3.4	3.2	3.1	2.8	.60	1.20	D.
6Z	4.2	4.0	3.8	3.7	3.4	.60	1.20	D.
7Z	4.9	4.7	4.5	4.4	4.1	.60	1.20	D.
8Z glass	6.0	5.8	5.6	5.5	5.2	.60	1.20	D.
8Z tall	6.0	5.8	5.6	5.5	5.2	.60	1.20	D.
No. 300	10.4	10.0	9.8	9.6	9.2	.90	2.00	G.
No. 303 glass	11.4	11.0	10.8	10.5	10.0	1.1	2.20	H.
No. 303	11.5	11.1	10.9	10.6	10.1	1.1	2.20	H.
No. 2	14.0	13.5	13.3	13.0	12.5	1.2	2.50	I.
No. 2½ glass	20.1	19.6	19.3	19.0	18.4	1.3	2.70	J.
No. 2½	20.3	19.8	19.5	19.2	18.6	1.3	2.70	J.
No. 10	74.5	73.4	72.9	72.1	70.9	2.8	5.90	U.

FACTORS OF QUALITY

§ 52.1618 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor and odor.

(2) *Factors rated by score points*—The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size and symmetry	20
Absence of defects	30
Character	30
Total score	100

(b) *Definition of flavor and odor.* "Normal flavor and odor" means that the canned pears are free from objectionable flavors and objectionable odors of any kind.

§ 52.1619 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means "18, 19, or 20 points").

§ 52.1620 Color.

(a) *General.* The factor of color refers to the color typical of the variety and its uniformity in each unit and among the units. The factor of color for canned pears that are spiced is not based on any detailed requirements and is not scored but the color shall be normal for peeled spiced canned pears; the other three factors (uniformity of size and symmetry, absence of defects, and character as applicable), are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) (*A*) *classification.* Halves, quarters, slices, diced, or whole styles of canned pears that possess a good color may be given a score of 18 to 20 points. "Good color" means that:

(1) The units of pears individually and collectively possess a characteristic, practically uniform color that is a typical light yellow-white or light greenish-white or light beige-white color for properly prepared and properly processed canned pears;

(2) Any skin pigment on the units may affect no more than slightly the overall color of the units or the product;

(3) There is otherwise not more than a slight variation from a typical translucent color for properly prepared and properly processed canned pears; and

(4) In halves, quarters, slices, or whole styles not more than 10 percent, by count, of the units may possess "reasonably good color", provided none of such units are "dead white" (or "chalky") in appearance; or

(5) One unit of halves, quarters, slices, or whole in a container is permitted to have "reasonably good color" if such unit exceeds the allowance of 10 percent, by count: *Provided,* That in all containers comprising the sample such "reasonably good color" units do not exceed an average of 10 percent of the total number of units.

(c) (*B*) *classification.* Halves, quarters, slices, diced, or whole styles of canned pears that possess a reasonably good color and mixed pieces of irregular sizes and shapes style of canned pears that possess at least a reasonably good color may be given a score of 16 or 17 points. Mixed pieces of irregular sizes and shapes of canned pears that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably good color" means that:

(1) The units of pears individually and collectively possess a reasonably characteristic and reasonably uniform typical color of properly prepared and properly processed canned pears;

(2) Any skin pigment on the units may materially affect the overall color of the units or product;

(3) Such characteristic color may show a very slight tint of pink or may be light tan (or beige) color, or may show a lack of uniformity or may vary in translucency; and

(4) In halves, quarters, slices, whole, or mixed pieces of irregular sizes and shapes styles not more than 10 percent, by count, of the units may possess "fairly good color" including units that may be "dead white" (or "chalky") in appearance; or

(5) One unit of halves, quarters, slices, whole, or of mixed pieces of irregular sizes and shapes in a container is permitted to have "fairly good color" including a unit that may be "dead white" (or "chalky") in appearance, if such unit exceeds the allowance of 10 percent, by count: *Provided,* That in all containers comprising the sample such "fairly good color" units do not exceed an average of 10 percent of the total number of units.

(d) (*C*) *classification.* Halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes styles of canned pears that possess a fairly good color may be given a score of 14 or 15 points. Canned pears that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the units of pears individually and collectively may vary noticeably from a uniform, characteristic color; may be "dead white" (or "chalky") in appearance; may have a slight pink or brown cast, but not a definitely pink or brown color; and are not off-color for any reason.

(e) (*SStd*) *classification.* Canned pears that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1621 Uniformity of size and symmetry.

(a) *General.* The factor of uniformity of size and symmetry for mixed pieces of irregular sizes and shapes of canned pears is not based on any detailed requirements and is not scored; the other three factors (color, absence of defects, and character as applicable) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) (*A*) *classification.* Halves, quarters, slices, diced or whole canned pears that are practically uniform in size and symmetry may be given a score of 18 to 20 points. "Practically uniform in size and symmetry" has the following meanings (and as summarized in table VIII of this subpart), with respect to the following styles of canned pears:

(1) *Halves; quarters; whole.* The units are reasonably symmetrical and the weight of the largest full-size unit does not exceed the weight of the smallest full-size unit by more than 50 percent; the weight of each half is not less than three-fifths ounce; and the weight of each quarter is not less than three-tenths ounce.

(2) *Slices.* Not more than 10 percent, by count, of the units vary noticeably from the uniform shape of slices.

(3) *Diced.* The units are fairly symmetrical and not more than 10 percent, by weight, of the units may be of such size as to pass through 5/16-inch square openings.

(c) (*B*) *classification.* Halves, quarters, slices, diced, or whole canned pears that are reasonably uniform in size and symmetry may be given a score of 16 or 17 points. "Reasonably uniform in size and symmetry" has the following meanings (and as summarized in table VIII of this subpart), with respect to the following styles of canned pears:

(1) *Halves; quarters; whole.* The units may vary in symmetry and the weight of the largest full-size unit does not exceed the weight of the smallest full-size unit by more than 75 percent; the weight of each half is not less than three-fifths ounce; and the weight of each quarter is not less than three-tenths ounce.

(2) *Slices.* Not more than 15 percent, by count, of the units may vary noticeably from the uniform shape of slices.

(3) *Diced.* The units may vary in symmetry and not more than 15 percent, by weight, of the units may be of such size as to pass through 5/16-inch square openings.

(d) (*C*) *classification.* Halves, quarters, slices, diced, or whole canned pears that are fairly uniform in size and symmetry may be given a score of 14 or 15 points. "Fairly uniform in size and symmetry" has the following meanings (and as summarized in table VIII of this subpart) with respect to the following styles of canned pears:

(1) *Halves; quarters; whole.* The units may vary in symmetry and the weight of the largest full-size unit may be not more than twice the weight of the smallest full-size unit; the weight of each half is not less than three-fifths ounce; and the weight of each quarter is not less than three-tenths ounce.

(2) *Slices.* Any amount of the units may vary noticeably from the uniform shape of slices.

(3) *Diced.* The units may vary in symmetry and not more than 20 percent, by weight, of the units may be of such size as to pass through 5/16-inch square openings.

(e) (*SStd*) *classification.* Canned pears of the applicable styles which fail to meet paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above the following stated grade, regardless of the total score for the product (this is a limiting rule):

(1) Halves, quarters, or whole canned pears in which the weight of the largest full-size unit is more than twice the weight of the smallest full-size unit shall not be graded above

substandard, and are also below standard in quality—mixed sizes.

(2) Halves of canned pears in which the weight of any half is less than three-fifths ounce shall not be graded above substandard and are also below standard in quality—small halves.

(3) Quarters of canned pears in which the weight of any quarter is less than three-tenths ounce shall not b graded above substandard and are als below standard in quality—small quarters.

(4) Slices and diced canned pears shall not be graded above substandard.

TABLE VIII.—UNIFORMITY OF SIZE AND SYMMETRY REQUIREMENTS FOR CANNED PEARS

Styles and criteria	(A) classification	(B) classification	(C) classification
Halves; quarters; whole:			
Symmetry of units	Reasonably symmetrical	May vary	May vary.
Weight variation (smallest unit versus largest unit).	50 percent maximum	75 percent maximum	100 percent maximum.
Weight of individual unit:			
Halves	3/5 oz minimum	3/5 oz minimum	3/5 oz minimum.
Quarters	3/10 oz minimum	3/10 oz minimum	3/10 oz minimum.
Slices:			
Variation from uniform shape	10 percent, by count, may vary noticeably.	15 percent, by count, may vary noticeably.	Any amount may vary noticeably
Diced:			
Variation in symmetry	Fairly symmetrical	May vary	May vary.
Size that pass through 3/10 in square openings.	10 percent, by weight, maximum.	15 percent, by weight, maximum.	20 percent, by weight, maximum

§ 52.1622 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous vegetable material; from peel; from external stems; from interior stems, seeds, core material or portions thereof; from blemished units; from improperly, insufficiently, or unevenly trimmed units for the applicable style; and from any other defects or defective units which detract from the appearance or edibility of the product.

(b) *Definitions of defects and defective units.* (1) "Interior stem" means an interior stem or portion of an interior stem of any length that is definitely fibrous, tough, or woody which affects the edibility of the unit.

(2) "Loose seed" means any pear seed, or the equivalent in pieces of one seed, not included in core material.

(3) A unit of "core material" means portions of a seed cell cavity or of a loose core, with or without seeds, aggregating approximately one-half of a pear core. Core material in whole-peeled uncored style is not considered a defect.

(4) "Minor blemishes" on a unit include:

(i) Light brown areas, aggregating the area of a circle one-fourth inch or less in diameter, which significantly affect the appearance of the unit;

(ii) Definitely corky or hard spots (corns) on outer surfaces, aggregating the area of a circle one-half inch in diameter or less, which are not accompanied by material discoloration;

(iii) Any similar surface defect that no more than materially affects the appearance of the unit.

(5) "Blemishes" on a unit include:

(i) Scab, hail injury, discoloration (abnormal), or other abnormality, aggregating the area of a circle more than one-fourth inch in diameter;

(ii) Dark brown areas, aggregating the area of a circle one-fourth inch or less in diameter, which materially affect the appearance of the unit;

(iii) Definitely corky or hard spots (corns) on outer surfaces, aggregating the area of a circle more than one-half inch in diameter, which are not accompanied by material discoloration; and

(iv) Very dark brown, black, or other very dark spots, regardless of the area, which materially affect the appearance or edibility of the unit.

(6) "Moderately trimmed" in the style of halves means that the unit:

(i) Is noticeably trimmed but retains the resemblance of a normal shape for the unit; and/or

(ii) Has gouges or similar cuts, indentations, or knife marks on the backs, edges, or surfaces that no more than materially affect the appearance of the unit; and/or

(iii) Shows marks of double stemming; and/or

(iv) Possesses moderate trimming on the face; and/or

(v) Is deeply or nonsymmetrically cored and stemmed.

(7) "Moderately trimmed" in the style of quarters, or whole means that the unit:

(i) Is noticeably trimmed but retains the resemblance of a normal shape for the unit; and/or

(ii) His gouges or similar cuts, indentations, or knife marks on the edges or surfaces that no more than materially affect the appearance of the unit.

(8) "Seriously trimmed" in the style of halves means that the unit:

(i) Is more than moderately trimmed; and/or

(ii) Is so trimmed (including gouges on the backs, edges, or surfaces) that the appearance is seriously affected but the unit retains a reasonably normal shape; and/or

(iii) Is so trimmed that parts of the calyx have not been removed so that the appearance is seriously affected.

(9) "Seriously trimmed" in the style of quarters or whole means that the unit:

(i) Is more than moderately trimmed; and/or

(ii) Is so trimmed (including gouges on the edges or surfaces) that the appearance is seriously affected but the unit retains a reasonably normal shape.

(10) "Crushed" means that the unit in the styles of halves, quarters, slices, or whole:

(i) Has lost its normal shape; and/or

(ii) Bears marks of crushing; and/or

(iii) Is crushed otherwise but not due to ripeness.

(11) "Broken" means that the unit in the styles of halves, quarters, slices, or whole:

(i) Is severed into definite parts; but halves which are slightly split from the edge to the core cavity or at the stem end are not "broken";

(ii) Portions equivalent to a full-size unit are considered as "one unit" in determining the percentage by count.

(12) "Other defects" or "other defective units" include:

(i) Any not specifically defined or mentioned (such as, but not limited to, a unit in halves style which is only partially cored) which materially affect the appearance or edibility of the unit;

(ii) Any not specifically defined or mentioned (such as, but not limited to, a unit in halves style which is not completely cored) which seriously affect the appearance or edibility of the unit.

(c) *Explanation of terms.* For the purposes of table IX of this subpart:

(1) "1 unit" without further qualification means that an alternative allowance of one unit affected as described is permitted in a container when the percentage allowance by count would be exceeded by the one unit.

(2) "One unit (avg)" means that an allowance of one unit affected as described is permitted in a container when the percentage allowance by count would be exceeded by the one unit: *Provided,* That in all containers comprising the sample such units affected as described do not exceed the allowance on an average based on the total number of units in the sample.

(3) "Ounces" means avoirdupois weight based on total contents.

(4) "Average" (or the abbreviation "Avg") with respect to the requirements of this section means the average as ascertained from all sample units.

(d) (*A*) *classification.* Halves, quarters, slices, diced, whole styles of canned pears that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the canned pears are practically free from any defects whether or not specifically mentioned that may affect the appearance or edibility of the product no more than slightly; and, in addition, the canned pears meet the requirements of table IX for the applicable style.

(e) (*B*) *classification.* Halves, quarters, slices, diced, or whole styles or canned pears that are reasonably free from defects and mixed pieces of irregular sizes and shapes style of canned pears that are at least reasonably free from defects may be given a score of 24 to 26 points. Canned pears that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the canned pears are reasonably free from any defects whether or not specifically mentioned that materially affect the appearance or edibility of the product; and, in addition, the canned pears meet the requirements of table IX for the applicable style.

(f) (*C*) *classification.* Halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes styles of canned pears that are fairly free from defects may be given a score of 21 to 23 points. Canned pears that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the canned pears are fairly free from any defects whether or not specifically mentioned that seriously affect the appearance or edibility of the product; and, in addition, the canned pears meet the requirements of table IX for the applicable style.

(g) (*SStd*) *classification.* Canned pears which fail to meet the requirements of paragraph (f) of this section may be given a score of 0 to 20 points and shall not be graded above the following stated grades, as applicable, regardless of the total score for the product (this is a limiting rule):

(1) Halves, quarters, whole canned pears shall not be graded above Substandard and may also be "Below Standard in Quality" for the applicable reasons:

(i) Not well peeled.

(ii) Partly crushed or broken.

(iii) Unevenly trimmed.

(iv) Blemished.

(2) Sliced, diced, mixed pieces of irregular sizes and shapes canned pears shall not be graded above Substandard and may also be "Below Standard in Quality" for the applicable reasons:

(i) Not well peeled.

(ii) Blemished.

TABLE IX—MAXIMUM ALLOWANCES FOR DEFECTS OR DEFECTIVE UNITS IN CANNED PEARS

All styles except as otherwise stated	Grade A	Grade B	Grade C
Peel	¼ sq. in.[2] per 16 ozs. (average).	½ sq. in.[2] per 16 ozs. (average).	1 sq. in.[2] per 16 ozs. (average).
External stems [1]	1 per 100 oz	1 per 100 oz	1 per 100 oz.
Interior stems	1 per 60 oz	1 per 30 oz	1 per 15 oz.
Units of core material [2]	1 per 60 oz	1 per 30 oz	1 per 15 oz.
Loose seeds	1 per 30 oz (average)	1 per 15 oz (average)	1 per 10 oz (average).
Broken or crushed [3]	5 percent by count or 1 unit	10 percent by count or 1 unit	10 percent by count or 1 unit.
Seriously trimmed [4]	None	None	10 percent by count or 1 unit.
Moderately trimmed [4]	Total: 10 percent by count	Total: 20 percent by count	No limit for moderately trimmed.
Minor blemishes; and blemished (combined).	do	do	Do.
With further limitations of—			
Minor blemishes; and blemished.	10 percent by count but no more than 5 percent by count blemished or 1 unit (average).	20 percent by count but no more than 10 percent by count blemished or 1 unit (average).	Total: 30 percent by count but no more than 20 percent by count blemished or 1 unit (average).

[1] Does not apply to style of: Whole uncored with stems.
[2] Does not apply to style of: Whole uncored.
[3] Does not apply to styles of: Diced or mixed pieces.
[4] Does not apply to styles of: Sliced, diced, or mixed pieces.

[38 FR 13330, May 21, 1973; 38 FR 15511, June 13, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1623 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture, and tenderness of the product.

(b) (*A*) *classification.* Halves, quarters, slices, diced, or whole canned pears that possess a good character may be given a score of 27 to 30 points. "Good character" has the following meanings with respect to the various styles of canned pears:

(1) *Halves; quarters.* The units possess a texture typical of properly and uniformly ripened pears that are properly processed; the texture is fleshy and free from noticeable graininess or toughness; the units are tender; the units are uniformly intact and pliable but firm enough to possess well-defined edges with no visible breaking down of the flesh; and not more than 10 percent, by count, of the units may possess a reasonably good character. One unit in a container is permitted to have a reasonably good character if one unit exceeds the allowance of 10 percent, by count: *Provided,* That in all containers comprising the sample, the units with reasonably good character do not exceed an average of 10 percent, by count, of the total number of units.

(2) *Whole.* The units possess a texture typical of properly and uniformly ripened pears that are properly processed; the texture is fleshy and free from noticeable graininess or toughness; the units are uniformly intact and firm with no visible breaking down of the flesh; and not more than 10 percent, by count, of the units may possess a reasonably good character. One unit in a container is permitted to have a reasonably good character if one unit exceeds the allowance of 10 percent, by count: *Provided,* That in all containers comprising the sample the units with reasonably good character do not exceed an average of 10 percent, by count, of the total number of units.

(3) *Slices; diced.* The product generally possesses a texture typical of properly and uniformly ripened pears that are properly prepared and processed and not more than 10 percent, by weight, of the drained pears may be disintegrated or mushy.

(c) (*B*) *classification.* Halves, quarters, slices, diced, or whole canned pears that possess a reasonably good character and mixed pieces of irregular sizes and shapes of canned pears that possess at least a reasonably good character may be given a score of 24 to 26 points. Canned pears that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" has the following meanings with respect to the following styles of canned pears:

(1) *Halves; quarters; mixed pieces of irregular sizes and shapes.* The units possess a texture typical of properly ripened pears that are properly processed; the units may possess a texture of moderate graininess; the units are reasonably tender or the tenderness may be variable within the unit; the units may be slightly firm or slightly ragged with slightly frayed edges or slightly soft but are not mushy; and not more than 10 percent, by count, of the units may possess a fairly good character. One unit in a container is permitted to have a fairly good character if one unit exceeds the allowance of 10 percent, by count: *Provided,* That in all containers comprising the sample the units with fairly good character do not exceed an average of 10 percent, by count, of the total number of units.

(2) *Whole.* The units possess a texture typical of properly ripened pears that are properly processed; the units may possess a texture of moderate graininess; the units are reasonably tender or the tenderness may be variable within the unit; the units may be slightly firm or slightly ragged or slightly soft but are not mushy; and not more than 10 percent, by count, of the units may possess a fairly good character. One unit in a container is permitted to have a fairly good character if one unit exceeds the allowance of 10 percent, by count: *Provided,* That in all containers comprising the sample the units with fairly good character do not exceed an average of 10 percent, by count, of the total number of units.

(3) *Slices, diced.* The product generally possesses a texture typical of

properly ripened pears that are properly prepared and processed and not more than 15 percent, by weight, of the drained pears may be disintegrated or mushy.

(d) (*C*) *classification.* Halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes of canned pears that possess a fairly good character may be given a score of 21 to 23 points. Canned pears that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" has the following meanings with respect to the following styles of canned pears:

(1) *Halves; quarters; mixed pieces of irregular sizes and shapes.* The units possess a texture of properly processed pears which may be variable; the units may possess a texture of marked graininess; the units may be lacking uniformity of tenderness; the units may be markedly firm or markedly ragged with frayed edges or may be soft; and not more than 10 percent, by weight, of the drained pears may be mushy or consist of units with hard-calyx ends or units that are not tender.

(2) *Whole.* The units possess a texture of properly processed pears which may be variable; the units may possess a texture of marked graininess; the units may be lacking uniformity of tenderness; the units may be markedly firm or markedly ragged or soft; and not more than 10 percent, by count, by the units may be mushy or consist of units with hard-calyx ends or units that are not tender. One unit in a container is permitted to be mushy or possess hard-calyx ends or not tender: *Provided,* That in all containers comprising the sample, all of such units do not exceed an average of 10 percent, by count, of the total number of units.

(3) *Slices, diced.* The product generally possesses a texture typical of properly prepared and processed pears and not more than 20 percent, by weight of the drained pears may be disintegrated or mushy.

(e) (*SStd*) *classification.* Halves, quarters, slices, diced, whole, and mixed pieces of irregular sizes and shapes of canned pears that fail to meet the requirements of paragraph (d) of this section or that are "not tender" may be given a score of 0 to 20 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule). Halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes of canned pears that are "not tender" are also "Below Standard in Quality—Not Tender."

LOT COMPLIANCE

§ 52.1624 Ascertaining the grade of a lot.

The grade of a lot of canned pears covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR 52.1 through 52.87).

SCORE SHEET

§ 52.1625 Score sheet.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Styles ....
( ) Halves ( ) Quarters ( ) Whole ....
( ) Sliced ( ) Diced ( ) Mixed pieces [1] ....
Count ....
Brix measurement ....
Sirup designation (extra heavy, heavy, etc.) ....

Factors			Score points
Color	20	(A)	18-20
		(B)	[2]16-17
		(C)	[3]14-15
		(SStd)	[3]0-13
Uniformity of size and symmetry.	20	(A)	18-20
		(B)	16-17
		(C)	14-15
		(SStd)	[3]0-13
Absence of defects.	30	(A)	27-30
		(B)	[2] [3]24-26
		(C)	[3]21-23
		(SStd)	[3]0-20
Character	30	(A)	27-30
		(B)	[2] [3]24-26
		(C)	[3]21-23
		(SStd)	[3]0-20
Total score......	100		

Flavor and odor ( ) normal ( ) off ....
Grade ....

[1] Limited to grade B, or lower.
[2] Partial limiting rule (mixed pieces style).
[3] Limiting rule.

Subpart—United States Standards for Grades of Canned Field Peas and Canned Black-eye Peas

Source: 18 FR 8027, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Identity and Grades

§ 52.1641 Identity.

(a) "Canned field peas" means canned field peas as defined in the definitions and standards of identity for canned vegetables (21 CFR 155.200) issued pursuant to the Federal Food, Drug and Cosmetic Act.

(b) "Canned black-eye peas" means canned black-eye peas as defined in the definitions and standards of identity for canned vegetables (21 CFR 155.200), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(c) "Canned peas" means canned field peas or canned black-eye peas.

(d) "Snap" or "snaps" means a piece or pieces of immature unshelled pods.

(e) "Canned peas without snaps" means canned peas which do not contain immature unshelled pods or pieces thereof.

(f) "Canned peas with snaps" means canned peas which contain pieces of immature unshelled pods.

(g) "Unit" means an individual field pea or black-eye pea or a piece of immature unshelled pod of either.

§ 52.1642 Grades of canned peas.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned peas that possess similar varietal characteristics; that possess a normal flavor and odor; that are fairly young; that are practically free from defects; that possess at least a fairly good color; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned peas that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a fairly good color; that are nearly mature; that are fairly free from defects; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Substandard" is the quality of canned peas that fail to meet the requirements of U.S. Grade C or U.S. Standard.

Fill of Container and Drained Weights

§ 52.1643 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned peas be filled with field peas or black-eye peas as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.1644 Recommended drained weight.

The drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned peas is determined by emptying the contents of the container upon a No. 8 sieve of proper diameter and allowing to drain for 2 minutes. A sieve 8 inches in diameter is used for the No. 2½ size can (401 × 411) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

Table No. 1

[Recommended minimum drained weight, in ounces, of field peas or black-eye peas, including snaps when canned with snaps]

Container size or designation	Ounces
No. 1 (Picnic)	7
No. 1 Tall	10½
No. 300	9¼
No. 303	11
No. 2	13¼
No. 10	72

FACTORS OF QUALITY

§ 52.1645 Ascertaining the grade.

(a) The grade of canned peas may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings of the factors of color, absence of defects, and character.

(b) The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Absence of defects	40
Character	40
Total score	100

(c) "Normal flavor and odor" means that the canned peas are free from objectionable flavors and objectionable odors of any kind.

§ 52.1646 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "15 to 20 points" means 15, 16, 17, 18, 19, or 20 points).

§ 52.1647 Color.

(a) (*A*) *classification*. Canned peas that possess a fairly good color may be given a score of 15 to 20 points. "Good color" means that the canned peas possess a fairly uniform color and are typical of fairly young field peas or black-eye peas of similar varietal characteristics.

(b) (*C*) *classification*. Canned peas that possess a good color may be given a score of 10 to 14 points. "Fairly good color" means that the canned peas possess a color that may be variable and typical of nearly mature field peas or black-eye peas of similar varietal characteristics.

(c) (*SStd*) *classification*. Canned peas that are definitely off color for any reason or fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 9 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1648 Absence of defects.

(a) *General*. The factor of absence of defects refers to the degree of freedom from extraneous vegetable matter, from loose skins and pieces of skins, loose cotyledons and pieces of cotyledons, mashed or broken units, and units blemished by pathological injury, insect injury, or other means.

(1) "Extraneous vegetable matter" means hulls or pieces of hulls, unshelled pods or pieces of unshelled pods (except in peas canned with snaps), leaves, stems, and other similar vegetable matter.

(2) "Mashed or broken" means seriously crushed so that the unit has lost its original conformation or is broken to the extent that a cotyledon or portion thereof has become separated from the unit.

(3) "Blemished" means discolored or spotted by pathological injury, insect injury, or other means to such an extent that the appearance or eating quality of the unit is materially affected.

(b) (*A*) *classification*. Canned peas that are practically free from defects may be given a score of 35 to 40 points. "Practically free from defects" means that for each 12 ounces drained weight of units there may be present not more than 2 pieces of extraneous vegetable matter, and the combined weight of all loose skins and pieces of skins, loose cotyledons and pieces of cotyledons, and mashed or broken units does not exceed 5 percent, and the weight of blemished units does not exceed 2 percent of the drained weight of the canned peas.

(c) (*C*) *classification*. If the canned peas are fairly free from defects, a score of 30 to 34 points may be given. Canned peas that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that for each 12 ounces drained weight of units there may be present not more than 4 pieces of extraneous vegetable matter, and the combined weight of all loose skins and pieces of skins, loose cotyledons and pieces of cotyledons, and mashed or broken units does not exceed 10 percent, and the weight of blemished units does not exceed 6 percent of the drained weight of the canned peas.

(d) (*SStd*) *classification*. Canned peas that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 29 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1649 Character.

(a) *General*. This factor refers to the tenderness and maturity of the canned peas.

(b) (*A*) *classification*. Canned peas that are fairly young may be given a score of 35 to 40 points. "Fairly young" means that the units are tender and in a fairly early stage of maturity.

(c) (*C*) *classification*. If the field peas or black-eye peas are nearly mature, a score of 30 to 34 points may be given. Canned peas that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Nearly mature" means that the units are fairly tender and may be mealy but not hard.

(d) (*SStd*) *classification*. Canned peas that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 29 points, and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1650 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1651 Score sheet for canned field peas and canned black-eye peas.

Container size ....

Container code or marking ....

Label ....

Net weight (ouncas) ....

Vacuum (inches) ....

Drained weight (ounces) ....

Style ....

Factors		Score points	
Color	20	(A)	15-20
		(C)	10-14
		(D)	[1] 0-9
Absence of defects	40	(A)	35-40
		(C)	[1] 30-34
		(D)	[1] 0-29
Character	40	(A)	[1] 35-40
		(C)	[1] 30-34
		(D)	0-29
Total score	100		

Grade ....

Normal flavor and odor ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Field Peas and Frozen Black-Eye Peas

SOURCE: 41 FR 16812, Apr. 22, 1976, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.1661 Product description.

"Frozen field peas" and "frozen Black-eye peas", called "frozen peas" in these standards, means the frozen product prepared from clean, sound, fresh, seed of proper maturity of the field pea plant (Vigna sinensis), by shelling, sorting, washing, blanching, and properly draining. The product is frozen and maintained at temperatures necessary for preservation. "Frozen peas" may contain succulent, unshelled pods (snaps) of the field pea plant as an optional ingredient used as a garnish.

§ 52.1662 Styles.

(a) *"Frozen peas"*.

(b) *"Frozen peas with snaps"*.

§ 52.1663 Types.

(a) *Single type*. Frozen peas that have distinct similarities of color and shape for the type are not considered "mixed". Single types include, but are not limited to, the following:

(1) *"Black-eye peas"* or other similar varietal types, such as "Purple-hull peas", that have a light-colored skin, a definite eye (contrasting color around the hilum), and are bean shaped;

(2) *"Crowder peas"* of various groups, such as "Brown Crowder", that are nearly round in shape and have blunt or square ends;

(3) *"Cream peas"* of various groups, including "White Acre", that have a solid cream-colored skin and are generally bean shaped; and

(4) *"Field peas"* means any varietal group or type of the field pea plant that has similar color and shape characteristics and includes "Black-eye peas", "Crowder peas", and "Cream peas".

(b) *Mixed type*. Frozen peas that are a mixture of two or more distinct single varietal groups or are not distinguishable as a single varietal group shall be considered "mixed" type.

§ 52.1664 Definitions of terms.

(a) *Absolute limit (AL)*. The maximum number of defects; or the minimum number of "color attributes" permitted in a sample unit.

(b) *Acceptable quality level (AQL)*. The maximum percent defective, or the maximum number of defects per hundred units; minimum percent "color attributes", or the minimum number of "color attributes" per hundred units, that, for purposes of acceptance sampling inspection, can be considered satisfactory as a process average.

(c) *Blemished*. "Blemished" means discolored, spotted, or damaged by any means to the extent that the appearance or eating quality is materially affected.

(d) *Broken*. "Broken" means the skin or portions of the skin, the cotyledon or portions of the cotyledon, have become separated from the unit. "Broken" is not applicable to "snaps" in the style of "frozen peas with snaps".

(e) *Character*. "Character" refers to the maturity and tenderness of the frozen peas, including snaps. Character is determined after cooking the product by the "cooking procedure" described in § 52.1670.

(1) *Good character*. The units are tender and in a reasonably young stage of maturity and are practically uniform in texture and tenderness.

(2) *Reasonably good character*. The units are reasonably tender and in a fairly young stage of maturity and may be variable in texture and tenderness; and the cotyledons may be mealy or firm but are not hard.

(f) *Defect*. Any nonconformance with a specified requirement. Defects are classified as "minor", "major", "severe", or "critical".

(g) *Deviant*. As applied to these standards, "deviant" means a sample unit that fails the requirements for the prerequisite factors of overall appearance, flavor and odor, freedom from grit, character, and freedom from broken peas; *Provided*, That such sample unit is not more than one grade below the intended or indicated grade.

(h) *Dissimilar varieties*. In single types only, peas that are of markedly different varietal colors and/or shapes. "Dissimilar varieties" is not applicable to snaps in the style of "frozen peas with snaps".

(i) *Harmless extraneous vegetable material*. (1) In the style of "frozen peas":

(i) *Class 1*—Hulls or pieces of unshelled pods (snaps), leaves, small tender stems, or other similar vegetable material; and

(ii) *Class 2*—Coarse, fibrous units of vegetable material which are harmless.

(2) In the style of "frozen peas with snaps":

(i) *Class 1*—Leaves, small tender stems, or other similar vegetable material, except "snaps"; and

(ii) *Class 2*—Coarse, fibrous units of vegetable material which are harmless.

(j) *Flavor and odor*—(1) *Good flavor and odor*. The product, after cooking, has a good, characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(2) *Reasonably good flavor and odor.* The product, after cooking, may be lacking in good flavor but is free from objectionable flavors and objectionable odors of any kind.

(k) *Grit.* Sand, silt, or other earthy materials.

(l) *Sample.* The number of sample units to be used for inspection of a lot.

(m) *Sample unit.* The amount of product specified to be used for inspection. It may be:

(1) The entire contents of a container; or

(2) A portion of the contents of a container; or

(3) A combination of the contents of two or more containers; or

(4) A portion of unpacked product.

(n) *Shriveled.* A unit that is seriously wrinkled in appearance, excluding "snaps".

(o) *Snap.* A succulent, unshelled pod of the field pea or Black-eye pea plant.

(p) *Unit.* Any individual frozen pea; or any individual succulent, unshelled pod.

§ 52.1665 Sample unit size.

Compliance with requirements for all factors of quality is based on the following sample unit sizes:

(a) "White Acre"—5 ounces (141.75 grams).

(b) All other types—10 ounces (283.5 grams).

§ 52.1666 Grades.

(a) *"U.S. Grade A"* is the quality of frozen peas that:

(1) Meets the following prerequisites (with deviants as specified in § 52.1673(a));

(i) Has a bright overall appearance;

(ii) Has a good flavor and odor;

(iii) Is practically free from grit;

(iv) Has a good character;

(v) Weight of broken peas does not exceed 0.25 ounce (7.1 grams) for "White Acre" peas and does not exceed 0.25 ounce (14.2 grams) for all other types; and

(2) Is within the limits for defects as classified in Table I and specified in Tables II and III.

(b) *"U.S. Grade B"* is the quality of frozen peas that:

(1) Meets the following prerequisites (with deviants as specified in § 52.1673(a));

(i) Has an overall appearance that may be dull but is not off-color;

(ii) Has a reasonably good flavor and odor;

(iii) Is practically free from grit;

(iv) Has a reasonably good character;

(v) Weight of broken peas does not exceed 0.5 ounce (14.2 grams) for "White Acre" peas and 1 ounce (28.35 grams) for all other types; and

(2) Is within the limits for defects as classified in Table I and specified in Tables II and III.

(c) *"Substandard"* is the quality of frozen peas that fail to meet the requirements for U.S. Grade B.

§ 52.1667 Factors of quality.

(a) The grade of a sample of frozen peas is based on compliance with the prerequisites specified in § 52.1666 and with limits for the following quality factors:

(1) Dissimilar varieties;

(2) Harmless extraneous vegetable material;

(3) Blemished units;

(4) Shriveled units; and

(5) Color attributes.

§ 52.1668 Classification of defects and grade compliance.

(a) Defects are classified as "minor", "major", "severe", or "critical". Each "X" mark in Table I represents "one defect".

(b) Classification of defects:

TABLE I

Quality factors	Defects	Classification			
		Minor	Major	Severe	Critical
Dissimilar varieties	Each unit [1]	X			
Harmless extraneous vegetable material	Class 1 (each unit) [2]			X	

TABLE I—Continued

Quality factors	Defects	Classification			
		Minor	Major	Severe	Critical
Blemished	Class 2 (each unit)				X
Shriveled	Each unit		X		
	do	X			

[1] Not applicable to "mixed" types.

[2] Not applicable to "snaps" in the style of "frozen peas with snaps."

(c) Grade compliance:

TABLE II

	Maximum defects permitted							
Absolute limit (AL)	67	32	5	2	100	49	9	4
Number of sample units	In the total sample							
	Grade A				Grade B			
	Total[1]	Major	Severe	Critical	Total[1]	Major	Severe	Critical
1	60	26	3	0	91	42	6	2
2	114	48	6	1	174	77	11	3
3	167	69	8	2	256	113	15	5
4	219	90	10	2	337	147	19	6
5	271	110	11	3	417	182	22	7
6	322	131	13	3	497	216	26	8
7	373	151	15	4	577	250	30	9
8	425	171	17	4	657	284	33	10
9	476	192	19	4	736	318	37	11
10	526	212	20	5	816	352	41	11
11	577	232	22	5	895	385	44	12
12	628	252	24	5	974	419	48	13
13	679	272	25	6	1,053	452	51	14
14	729	291	27	6	1,132	486	55	15
15	780	311	29	6	1,211	519	58	16
16	830	331	30	7	1,290	553	62	17
17	881	351	32	7	1,369	586	65	18
18	931	371	33	7	1,447	619	69	19
19	981	390	35	7	1,526	653	72	19
20	1,032	410	37	8	1,605	686	76	20
21	1,082	430	38	8	1,683	719	79	21
Acceptable quality level (AQL)[2]	7.0	2.70	0.20	0.03	11.0	4.60	0.45	0.10

[1] Total = Minor + major + severe + critical.

[2] Based on an average count of 1,400 units for "white acre" peas and 700 units for all other types per 10 oz. package

§ 52.1669 Classification of color and grade compliance.

(a) *General.* The requirement for "color attributes" is applicable for Grade A classification only. "Color attributes" does not apply to units of "snaps" in the style of "frozen peas with snaps."

(b) *Color attributes.* "Color attributes" are defined as follows:

(1) *"Black-eye peas"* and other similar varietal types—Each unit that has an obvious green color.

(2) *"Crowder peas".* Each unit with a color that is characteristic of very young peas.

(3) *"Cream peas".* Each unit that has an obvious green color.

(4) *"Field peas" and "mixed types".* Each unit with a color that is characteristic of very young peas.

(c) *Compliance.* For the purposes of determining compliance with the requirements of Grade A color, the applicable varietal type shall meet the acceptance numbers for color attributes in Table III.

Table III

	Minimum number permitted	
Absolute limit (AL)	73	119

Number of sample units	Black-eye peas, cream peas, field peas, and mixed types (color attributes)	Crowder peas (color attributes)
	In the total sample	
1	84	133
2	175	276
3	268	421
4	362	566
5	456	712
6	551	859
7	646	1,006
8	741	1,153
9	837	1,301
10	932	1,448
11	1,028	1,596
12	1,124	1,744
13	1,220	1,892
14	1,315	2,040
15	1,411	2,188
16	1,508	2,336
17	1,604	2,485
18	1,700	2,633
19	1,796	2,782
20	1,892	2,930
21	1,989	3,079
Acceptable quality level (AQL)[1]	14.0	21.50

[1] Based on an average count of 1,400 units for "white acre" peas and 700 units for all other types per 10 oz. package.

§ 52.1670 Determining flavor, odor, presence of grit, maturity, tenderness, and texture.

(a) *General.* The cooking procedure is used to determine compliance with the requirements for flavor, odor, presence of grit, maturity, tenderness, and texture.

(b) *Cooking procedure.* Place 10 ounces (283.5 grams) of thawed product in a 2 quart (1.9 liter) sauce pan containing 400 milliliters of tap water (without the addition of salt) that has been brought to a boil. Continue to heat rapidly until the water begins to boil again. Cover the pan and boil for 40 minutes, reducing the heat to maintain a constant boil. Immediately after cooking, pour the product on to a flat receptacle and spread out to cool. The product should be evaluated for flavor, odor, presence of grit, maturity, tenderness, and texture while warm.

§ 52.1671 Lot acceptance for style.

In the style of "frozen peas with snaps," the number of sample units that contain less than 3 snaps or more than 10 percent, by weight, of snaps shall not exceed the acceptance number specified in the sampling plans in the "Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products" (§ 52.38).

§ 52.1672 Sample size.

(a) *General.* The sample size to determine compliance with requirements for prerequisites specified in § 52.1666 for other quality factors, shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products" (§ 52.38) for Lot Inspection or on-line Inspection, as applicable.

(b) *Deviants.* The acceptance numbers for deviants specified in the sampling plans cited in paragraph (a) of this section apply only to the prerequisite factors specified for the grade in § 52.1666. They do not apply to the quality factors covered by the sampling plans in § 52.1668 and § 52.1669.

§ 52.1673 Lot acceptance for quality.

A lot of frozen peas is considered as meeting the requirements for quality if:

(a) The number of deviants for the prerequisites specified for the applicable grade in § 52.1666 does not exceed the acceptance number specified in the sampling plans in the "Regulations Governing Inspection of Processed Fruits and Vegetables and Related Products" (§ 52.38).

(b) The values permitted and the AL values for the applicable defect classifications specified in Tables II and III are not exceeded.

§ 52.1674 Defect tally.

DEFECT TALLY FOR FROZEN FIELD PEAS AND FROZEN BLACK-EYE PEAS

No., size, and kind of container ....

Label ....

Container mark ....

Net weight ....

Sample unit No. ....

Prerequisite grade ....

Reason downgraded ....

Defect	Minor	Major	Severe	Critica
Dissimilar varieties				
Blemished				
Shriveled				
Harmless extraneous vegetable material				
Total (each class)				
Cumulative total (each class)				
Total (all classes)				
Cumulative total (all classes)				
Color				
Total (sample unit)				
Cumulative total (sample)				

Subpart—United States Standards for Grades of Pickles

SOURCE: 31 FR 10235, July 29, 1966, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND STYLES

§ 52.1681 Product description.

"Pickles" means the product prepared entirely or predominantly from cucumbers (Cucumis sativus L). Clean, sound ingredients are used which may or may not have been previously subjected to fermentation and curing in a salt brine (solution of sodium chloride NaCl). The prepared pickles are packed in a vinegar solution, to which may be added salt and other vegetable(s), nutritive sweetener(s), seasoning(s), flavoring(s), spice(s) and other ingredients permissible under the Federal Food, Drug, and Cosmetic Act. The product is packed in suitable containers and heat treated, or otherwise processed to assure preservation.

§ 52.1682 Styles of pickles.

(a) "Whole" means the cucumber ingredient is whole.

(b) "Sliced crosswise" or "crosscut" applies to cucumbers cut into slices transversely to the longitudinal axis. The cut surfaces may have flat-parallel or corrugated-parallel (waffle cut) surfaces.

(c) "Sliced lengthwise" means cut longitudinally into halves, quarters, or other triangular shapes, or otherwise into units with parallel surfaces with or without ends removed.

(d) "Cut" means cut or broken into units which may or may not be uniform in size or shape.

(e) "Relish" means finely cut or finely chopped pickles.

TYPES OF PACK

§ 52.1683 Cured type.

Pickles of cured type are cured by natural fermentation in a salt brine solution (NaCl) which may contain dill herb or other flavorings. The pickle ingredient may be partially desalted and is then processed or preserved in a vinegar solution with other ingredients of various compositions to give the characteristics of the particular type of pickle. The distinguishing characteristics of the various types of cured pickles are as follows:

(a) *Dill pickles (natural or genuine).* Dill pickles (natural or genuine) are cured in salt brine with dill herb.

(b) *Dill pickles (processed).* Dill pickles (processed) are cured pickles packed in a vinegar solution with dill flavoring(s).

(c) *Sour pickles.* Sour pickles are cured pickles packed in a vinegar solution.

(d) *Sweet pickles and mild sweet pickles.* Sweet pickles and mild sweet pickles are cured pickles packed in a vinegar solution with suitable nutritive sweetening ingredient(s).

(e) *Sour mixed pickles.* Sour mixed pickles are cured pickles packed in a vinegar solution. The pickles may be of any style or combination styles other than relish. Sour mixed pickles contain onions and cauliflower and other ingredients as outlined in Table I.

(f) *Sweet mixed pickles and mild sweet mixed pickles.* Sweet mixed pickles and mild sweet mixed pickles are cured pickles packed in a vinegar solution with suitable nutritive sweetening ingredient(s). The pickles may be of any style or combination of styles other than relish. Such pickles contain onions and cauliflower and other ingredients as outlined in Table I.

(g) *Sour mustard pickles or sour chow-chow pickles.* Sour mustard pickles or sour chow-chow pickles are cured pickles of the same styles and ingredients as sour mixed pickles, except that instead of liquid solution they are packed in a prepared mustard sauce of proper consistency. The pickle ingredients are as outlined in Table I.

(h) *Sweet mustard pickles or sweet chow-chow pickles.* Sweet mustard pickles or sweet chow-chow pickles are cured pickles of the same styles and ingredients as sweet mixed pickles, except that instead of liquid solution they are packed in a sweetened prepared mustard sauce of proper consistency. The pickle ingredients are as outlined in Table I.

(i) *Sour pickle relish.* Sour pickle relish consists of cured, finely cut or finely chopped cucumber pickles packed in a vinegar solution. Sour pickle relish may contain other finely cut or chopped vegetable ingredients as outlined in Table I.

(j) *Sweet pickle relish and mild sweet pickle relish.* Sweet pickle relish and mild sweet pickle relish consists of cured, finely cut or finely chopped cucumbers packed in a vinegar solution with suitable nutritive sweetening ingredient(s). Sweet pickle relish may contain other finely cut or chopped vegetable ingredients as outlined in Table I.

§ 52.1684 Fresh-pack type.

Pickles of fresh-pack type are prepared from uncured unfermented cucumbers and are packed in a vinegar solution with other ingredients of various compositions to give the characteristics of the particular type of pickle. They are sufficiently processed by heat to assure preservation of the product in hermetically-sealed containers. The distinguishing characteristics of the various types of fresh-pack pickles are as follows:

(a) *Fresh-pack dill pickles.* Fresh-pack dill pickles are packed in a vinegar solution with dill flavoring(s).

(b) *Fresh-pack sweetened dill pickles.* Fresh-pack sweetened dill pickles are packed in a vinegar solution with nutritive sweetening ingredient(s), and dill flavoring(s).

(c) *Fresh-pack sweetened dill relish.* Fresh-pack sweetened dill relish consists of finely cut or finely chopped cucumbers packed in a vinegar solution with suitable nutritive sweetening ingredient(s) and dill flavoring(s). The relish may contain other finely cut or finely chopped vegetable ingredients as outlined in Table I.

(d) *Fresh-pack sweet pickles and fresh-pack mild sweet pickles.* Fresh-pack sweet pickles and fresh-pack mild sweet pickles are packed in a vinegar solution with nutritive sweetening ingredient(s).

(e) *Fresh-pack sweet relish and fresh-pack mild sweet relish.* Fresh-pack sweet relish and fresh-pack mild sweet relish consists of finely cut or finely chopped cucumbers packed in a vinegar solution with suitable nutritive sweetening ingredient(s). The relish may contain other finely cut or finely chopped vegetable ingredients as outlined in Table I.

TABLE I.—PROPORTIONS OF PICKLE INGREDIENTS IN CERTAIN TYPES AND STYLES

Pickle ingredients and style	Cured type and fresh-pack type—percent by weight of drained weight of product	
	Sour mixed; sweet mixed; sour mustard or sour chow chow; sweet mustard or sweet chow chow	Sour relish; sweet relish; sweetened dill relish; hamburger relish; mustard relish
Cucumbers—any style other than relish.	60% to 80%	
Cucumbers—finely cut.		60% to 100%.
Cauliflower—pieces.	10% to 30%	
Cauliflower—finely cut.		10% to 30% (optional).
Onions—whole (maximum diameter of 1¼ inch).	5% to 12%	
Onions—sliced or cut.	do	
Onions—finely cut.		5% to 12% (optional).
Green tomatoes—whole or pieces.	10% maximum	
Green tomatoes—finely cut.		10% maximum (optional).
Red, green, or yellow peppers or pimientos—cut, finely cut, or pieces.	Optional	Optional.
Cabbage	do	Do.
Olives	do	Do.
Tomato paste		Required (hamburger relish).
Mustard or prepared mustard.	Required in chow chow and mustard pickles.	Required in mustard relish—optional in hamburger relish.

(f) *Fresh-pack dietetic pickles.* Fresh-pack dietetic pickles may be prepared in any style with or without the addition of sweetening ingredient(s), salt (NaCl), and other suitable ingredient(s) as declared and permitted under the Federal Food, Drug, and Cosmetic Act for foods purporting to be for special dietary uses.

GRADES

§ 52.1685 Grades of pickles.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of pickles in which the cucumbers possess similar varietal characteristics; and that for the applicable type: (1) Possess a good flavor; (2) possess a good color; (3) are reasonably uniform or practically uniform in size; (4) are practically free from defects; (5) possess a good texture; and (6) score not less than 90 points as outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of pickles in which the cucumbers possess similar varietal characteristics; and that for the applicable type: (1) Possess a reasonably good flavor; (2) possess a reasonably good color; (3) may or may not be at least reasonably uniform in size; (4) are reasonably free from defects; (5) possess a reasonably good texture; and (6) score not less than 80 points as outlined in this subpart.

(c) "Substandard" is the quality of pickles that fail to meet the requirements of U.S. Grade B.

FILL OF CONTAINER

§ 52.1686 Recommended fill of container.

It is recommended that each container be filled as full as practicable with product without impairment of quality. The pickle ingredient shall be covered or practically covered with the packing medium, and the product shall occupy not less than 90 percent of the total capacity of the container.

§ 52.1687 Quantity of pickle ingredient.

(a) The recommended minimum quantity of pickle ingredient is designated as a percentage of the declared volume of product in the container for all items except pickle relish. Minimum quantity of pickle relish is designated as a relationship of the drained weight of the pickle ingredient to the declared volume of the container (see § 52.1699). The minimum quantities of pickle ingredient recommended herein are not incorporated in the grades of the finished product, since minimum quantity, as such, is not a factor of quality for the purposes of these grades.

(1) (i) The percent volume of pickle ingredient is determined for all styles, except relish, by one of the following methods or any other method that gives equivalent results:

Method 1—Direct displacement (overflow-can method) (See § 52.1699).

Method 2—Displacement in graduated cylinder.

Method 3—Measurement of pickle liquid.

(ii) Copies of these methods and the procedure for the determination of percent weight/volume (w/v) of relish and recommended amounts for most container sizes are available upon request from:

Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, DC 20250.

TABLE II—ALL STYLES (OTHER THAN RELISH)—RECOMMENDED PICKLE INGREDIENT

Type of pack	Minimum fill percent (volume)
Cured	55
Fresh-Pack	57

TABLE III—RELISH—RECOMMENDED DRAINED WEIGHT

Type of pack	Minimum percent (weight/volume)
Cured:	
Sweet	92
Other than sweet	88
Fresh-Pack:	
Sweet	85
Other than sweet	80

§ 52.1688 Compliance with recommended minimum quantity of pickle ingredient.

Compliance with the recommended minimum quantity of pickle ingredient is determined by averaging the values obtained from all the containers in the sample which represents a specific lot. The lot is considered as meeting the recommendations if the following criteria are met:

(a) The sample average meets the recommended minimum quantity of pickle ingredient; and

(b) There is no unreasonable shortage of pickle ingredient in any container.

SIZES AND COUNTS

§ 52.1689 Sizes for whole pickles.

Sizes of whole pickles are based on the diameter and the relationship of diameter to the count per gallon. Size designations and applicable counts and diameters are outlined in Table IV in this subpart. The diameter of a whole cucumber is the shortest diameter at the greatest circumference measured at right angles to the longitudinal axis of the cucumber.

TABLE IV—SIZES OF WHOLE PICKLES

Word designation	Count per gallon	Diameters (inches)
Midget	270 or more	¾ inch or less.
Small gherkin	135–269	Up to 15/16.
Large gherkin	65–134	Up to 1 1/16.
Small	40–64	Over 1 1/16 to 1⅜.
Medium	26–39	Over 1⅜ to 1½.
Large	18–25	Over 1½ to 1¾.
Extra large	12–17	Over 1¾ to 2⅛.

Blend of sizes	A combination of any two adjacent designated sizes.
Mixed sizes	A combination of more than two adjacent designated sizes.

FACTORS OF QUALITY

§ 52.1690 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit is ascertained by considering certain factors and analytical requirements which are not scored; the ratings for the factors of color, uniformity of size, defects, and texture which are scored; the total score; and the limiting rules which may apply.

(b) *Factors and analytical requirements not rated by score points.*

(1) Varietal characteristics.

(2) Acid content.

(3) Salt content.

(4) Brix value or Baume value.

(5) Flavor (Palatability).

(c) *Factors rated by score points.* The relative importance of each factor is expressed numerically on a scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Uniformity of size	20
Defects	30
Texture	30
Total score	100

(d) *Flavor*—(1) *General.* In evaluating flavor for the respective types—cured and fresh-pack—consideration is given to (i) those flavor characteristics which serve to identify the type and flavor; (ii) the effects of curing, preparation, processing and storing; (iii) compliance with the requirements for acidity, salt and sweetener; and (iv) freedom from objectionable and off flavors of any kind.

(2) "Good flavor" means a good distinctive flavor for the type. The product meets the analytical requirements of Table V or VI as applicable.

(3) "Reasonably good flavor" means a flavor somewhat lacking in distinctive flavor of the type but is free from objectionable flavors and odors.

TABLE V—CURED TYPE

[Analytical limits for "good flavor" in grade A]

Cured type	Acetic acid in gram per 100 ml. unless indicated othewise		Salt			Brix (minimum)	Baumé (minimum)
	Minimum	Maximum	NaCl (maximum)	Salometer			
				Minimum	Maximum		
Dills (natural or genuine).	Lactic 0.6			10°	19°		
Dills (processed)	0.6			10°	19°		
Sour Sour mixed Sour relish	1.7	2.7		10°	19°		
Sweets Sweet mixed Sweet relish	1.7	2.7	3 gms. (per 100 ml.)			32.64°	18.0°
Mild sweet Mild sweet mixed Mild sweet relish	1.0					20.0°	12.0°
Sour mustard or sour chow chow.	1.7 gms[1]	2.7 gms[1]	3 gms. (per 100 grms.)				
Sweet mustard or sweet chow chow.	1.7 gms[1]	2.7 gms[1]	3 gms. (per 100 grms.)			28.0°	15.5°

[1] Per 100 grms.

TABLE VI—FRESH-PACK TYPE

[Analytical limits for "good flavor" in grade A]

Fresh-pack type	Acid (acetic) (grams per 100 ml.)		NaCl (salt) (grams per 100 ml.)		Brix (minimum)	Baumé[1] (minimum)
	Minimum	Maximum	Minimum	Maximum		
Fresh-pack dills	0.5	1.1	1.75	4.25		
Fresh-pack sweetened dills	.5	1.1	1.75	4.25	7.2°	4.0°
Fresh-pack sweetened dill relish	.5	1.1	1.75	4.25	7.2°	4.0°
Fresh-pack sweet and mild sweet pickles	.8	1.65	1.25	2.75	18.0°	10.0°
Fresh-pack sweet and mild sweet relish	.8	1.65	1.25	2.75	18.0°	10.0°
Fresh-pack dietetic						

§ 52.1691 Ascertaining the rating for each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1692 Color.

(a) (*A*) *classification.* Pickles that possess a good color may be given a score of 18 to 20 points. "Good color" means that the overall color appearance is typical of pickles that have been properly prepared and properly preserved or processed; and has the following further meanings for the respective type:

(1) *Grade A Color—cured type.* (i) The typical skin color of the cucumber ingredient ranges from a translucent light green to dark green and is practically free from bleached areas. Not more than 10 percent, by weight, of the cucumber ingredient may vary markedly from such typical color.

(ii) In mixed pickles, chow chow pickles, and pickle relish all of the pickle ingredients possess a good, practically uniform typical color for the respective ingredient.

(iii) The pickles shall be free of ripe cucumbers or other off-color vegetable ingredients.

(2) *Grade A Color—fresh-pack type.* (i) The typical skin color of the cucumber ingredient ranges from an opaque yellow-green to green. Not more than 15 percent, by weight, of the cucumber ingredient may vary markedly from such typical color.

(ii) In pickle relish all of the pickle ingredients possess a good, reasonably uniform typical color for the respective ingredient.

(iii) The pickles shall be free of ripe cucumbers or other off-color vegetable ingredients.

(b) (*B*) *classification.* If the pickles possess a reasonably good color, a score of 16 to 17 points may be given. Pickles that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the overall color appearance is reasonably typical of pickles that have been properly prepared and properly preserved or processed; and has the following meanings for the respective type:

(1) *Grade B Color—cured type.* (i) The typical skin color of the cucumber ingredient ranges from light green to dark green and is reasonably free from bleached areas. Not more than 25 percent, by weight, of the cucumber ingredient may vary markedly from such typical color.

(ii) In mixed pickles, chow chow pickles, and pickle relish all of the pickle ingredients possess a reasonably good, reasonably uniform typical color for the respective ingredient.

(iii) The pickles shall be free from ripe cucumbers or other off-color vegetable ingredients.

(2) *Grade B Color—fresh-pack type.* (i) The typical skin color of the cucumber ingredient ranges from yellow-green to green. Not more than 30 percent, by weight, of the cucumber ingredient may vary markedly from such typical color.

(ii) In pickle relish all of the pickle ingredients possess a good, fairly uniform typical color for the respective ingredient.

(iii) The pickles shall be free of ripe cucumbers or other off-color vegetable ingredients.

(c) (*SStd.*) *classification.* Pickles that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 15 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1693 Uniformity of size.

(a) *Definitions of terms.* (1) "Diameter" of a whole pickle means the shortest diameter measured transversely to the longitudinal axis at the greatest circumference of the pickle.

(2) "Diameter" of a unit sliced crosswise is determined by measuring the shortest diameter of the largest cut surface of the unit.

(3) "Length" of a unit sliced lengthwise is the longest straight measurement at the approximate longitudinal axis.

(4) "Blend" of sizes is a combination of any two adjacent designated sizes.

(5) "Mixed" sizes is a combination of more than two adjacent designated sizes.

(b) (*A*) *classification.* Pickles that are practically uniform in size may be given a score of 18 to 20 points. "Practically uniform in size" means that the units within a single style may vary moderately in size but not to the extent that the overall appearance of the product is materially affected, and that further meet the criteria for variation in diameter, length, or weight for the style as stated in Table VII. Small, odd sized units in the top of the container, which are added to insure well filled containers, shall not be deemed as detracting from the quality.

TABLE VII

[Limits in (A) classification for uniformity of size]

	Maximum length variation		Maximum diameter variation		Thickness	
	In all units (inches)	In 90% of units (inch)	In all units (inch)	In 90% of units (inch)	Minimum (inch)	Maximum (inch)
Whole styles:						
Midget size	¾	½	3/16	3/16		
Gherkin size						
Small size	1	¾	⅜	¼		
Medium size						
Large size	1¼	1	7/16	5/16		
Blend of sizes	(1)	(1)	(1)	(1)		
Mixed sizes	(2)	(2)	(2)	(2)		
Sliced lengthwise:						
Halves or triangular shapes	1¾	1				
With parallel surfaces	1¾	1				
Sliced crosswise	(3)	(3)	2⅛	2⅛	⅛ ⅛	[illegible] [illegible]

Cut pickles	Weight variations—Not more than 5 percent, by weight, of all cucumber units may be smaller than ⅛ ounce each; and in the remainder, the largest unit is no more than 4 times the weight of the smallest unit.
Relish	Size appearance—The pickle ingredients may vary moderately in size. The presence of oversized pieces does not affect overall appearance.

[1] Full range of 2 adjacent sizes.
[2] Range of more than 2 adjacent sizes.
[3] Maximum diameter.

(c) (*B*) *classification.* If the cucumber pickles are reasonably uniform in size, a score of 16 or 17 points may be given. "Reasonably uniform in size" means that the units may vary considerably in size and may fail to meet in some respects the criteria for variation in diameter, length, or weight as stated in Table VII, but not to the extent that the overall appearance of the product is seriously affected.

(d) (*SStd.*) *classification.* Pickles that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 15 points and shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).

§ 52.1694 Defects.

(a) *General.* This factor is concerned with imperfections in the product, such as grit, attached stems, misshapen pickles, discoloration, or mechanical damage which affect its appearance or edibility.

(b) *Definitions.* (1) "Curved" pickles means whole cucumber pickles that are curved at an angle of 35° or more but not more than 60°.

(2) "Misshapen" pickles means whole cucumber pickles that are curved at more than a 60-degree angle, "nubbins", and other deformed pickles.

(3) "Grit, sand, or silt" means any particle of earthy material, whether in the liquid packing medium or imbed-

ded in the skin or flesh of the pickle, that affects the edibility.

(4) "Blemished" means affected by discoloration, scars, scratches, skin breaks, or other similar imperfections. Pickles so affected are classified in varying degrees as:

(i) Minor blemishes—those which detract only slightly from the appearance of the unit, but which in increasing numbers affect the overall appearance of the product.

(ii) Major blemishes—those which detract, but not seriously, from the appearance and edibility of the product.

(iii) Serious blemishes—those which strongly detract from the appearance and edibility of the product.

(5) "Mechanical damage" means crushed or broken units, slices with missing centers, or similar damage which materially detracts from the appearance of the unit. Small odd-sized units in top of container are not considered mechanical damage when apparently added to insure well-filled containers.

(6) "Stem" means any attached stem longer than three-eighths inch.

(7) "Long stem" means any attached stem longer than three-fourths inch.

(8) "End cut" in sliced crosswise means a cucumber unit with only one cut surface.

(9) "Other defects" means any defects, or defective units, not specifically mentioned which affect the appearance or edibility, or both, of the product. These include, but are not necessarily limited to, abnormally colored pickle ingredients and harmless vegetable or other harmless material not associated with proper pickle preparation or packaging.

(c) (*A*) *Classification.* Pickles that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that:

(1) There may be present no more than a trace of grit;

(2) The product meets the requirements of Grade A as indicated in Table VIII; and

(3) Other defects, individually or collectively, do not materially affect the appearance or edibility of the product.

(d) (*B*) *Classification.* If the pickles are reasonably free from defects, a score of 24 to 26 points may be given. Pickles that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) There may be present a small amount of grit which does not seriously affect the edibility of the product;

(2) The product meets the requirements of Grade B as indicated in Table VIII; and

(3) Other defects, individually or collectively, do not seriously affect the appearance or edibility of the product.

(e) (*SStd.*) *classification.* Pickles that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

(f) *Explanation of allowances.* For the purposes of Table VIII of this subpart the allowances specified for the respective type of defect and grade classification are applicable to individual containers, except that when a fractional unit results because of the application of the percentage allowance a whole unit is permitted in lieu of such fractional unit: *Provided,* That in all containers comprising the sample the average of such defective units does not exceed the allowance.

TABLE VIII

[Maximum allowances for defects, or defective units]

Defects or defective units (in all styles and types unless stated otherwise)	Grade A	Grade B
Curved pickles (in whole style or whole units in other styles).	10 percent, by count, of whole units	20 percent, by count, of whole units
Misshapen pickles (in whole style or whole units in other styles).	5 percent, by count, of whole units	15 percent, by count, of whole units

TABLE VIII—Continued

[Maximum allowances for defects, or defective units]

Defects or defective units (in all styles and types unless stated otherwise)	Grade A	Grade B
Units with attached stems (longer than ¾ inch).	10 percent, by count, of all cucumber units but no more than 1 percent, by count, of all cucumber units with "long stems".	20 percent, by count, of all cucumber units but no more than 4 percent, by count, of all cucumber units with "long stems."
End cuts (in sliced crosswise style or units sliced crosswise).	5 percent, by weight, of all cucumber units.	15 percent, by weight, of all cucumber units.
Damaged by mechanical injury	10 percent, by count, of all pickle units including vegetable ingredients other than cucumber.	15 percent, by count, of all pickle units including vegetable ingredients other than cucumber.
In cured type:		
Minor blemish	Reasonably free	
Major and serious blemish	10 percent, by count, but no more than 1 percent, by count, may be serious.	20 percent, by count, but no more than 3 percent, by count, may be serious.
In fresh-pack type:		
Minor blemish	Fairly free	
Major and serious blemish	20 percent, by count, but no more than 5 percent, by count, may be serious.	30 percent, by count, but no more than 10 percent, by count, may be serious.

§ 52.1695 Texture.

(a) *General.* The factor of texture refers to the firmness, crispness, and the condition of the cucumber ingredient and of any other vegetable ingredient(s) which may be present.

(b) *Definitions.* (1) "Chalky white area" means a pronounced opaque, chalky white internal portion of which, in cross-section, the chalky area exceeds ⅛ of the pickle area. Very pale green to translucent white internal areas are not considered "chalky white" areas.

(c) *(A) classification.* Pickles that possess a good texture may be given a score of 27 to 30 points. "Good texture" means that the cucumber and other vegetable ingredient(s) are firm and crisp, are practically free from cucumber pickle units with large objectionable seeds, detached seeds, and tough skins; and in addition has the following meanings for the respective type:

(1) *Grade A Texture—cured type.* Of the cucumber ingredient, there may be present not more than:

(i) 5 percent, by count, that are shriveled, soft, or slippery. Very slight shriveling is permitted in sweet pickles.

(ii) 5 percent, by count, of whole units with hollow centers; and

(iii) 10 percent, by count, of whole, sliced, or cut units with chalky white areas.

(2) *Grade A Texture—fresh-pack type.* Of the cucumber ingredient, there may be present not more than:

(i) 10 percent, by count, that are shriveled, soft, or flabby; and

(ii) 15 percent, by count, of whole units with hollow centers.

(d) *(B) classification.* If the pickles possess a reasonably good texture a score of 24 to 26 points may be given. "Reasonably good texture" means that the cucumber and other vegetable ingredients are reasonably firm and crisp; are reasonably free from cucumber pickle units with large objectionable seeds, detached seeds and tough skins; and in addition has the following meanings for the respective type:

(1) *Grade B texture—cured type.* Of the cucumber ingredient, there may be present not more than:

(i) 10 percent, by count, that are markedly shriveled, soft, or slippery;

(ii) 10 percent, by count, of whole units with hollow centers; and

(iii) 20 percent, by count, of whole, sliced, or cut units with chalky white areas.

(2) *Grade B texture—fresh-pack type.* Of the cucumber ingredient, there may be present not more than:

(i) 15 percent, by count, that are markedly shriveled, soft, or flabby; and

(ii) 25 percent, by count, of whole units with hollow centers.

(e) (*SStd.*) *classification.* Pickles that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

METHODS OF ANALYSIS AND DEFINITIONS

§ 52.1696 Definitions of analytical terms.

(a) *Degrees Baume.* The density of the packing medium in terms of degrees Baume is determined with a Baume hydrometer (modulus 145) corrected to 20° C. (68° F.).

(b) *Brix value.* Brix value (or "Brix") is determined with a Brix hydrometer calibrated in percent sugar, by weight, corrected to 20° C. (68° F.).

(c) *Degrees Salometer.* Degrees salometer is determined with a salt hydrometer calibrated in Salometer degrees (0° to 100°) corrected to 20° C. (68° F.). Each degree Salometer corrected to 20° C. (68° F.) is equal to 0.2643 percent salt (NaCl), by weight, in solution. Each 1 percent salt, by weight, in solution at 20° C. (68° F.) corresponds to 3.7836° Salometer.

(d) *Salt.* Salt (NaCl) is determined by titration and the results expressed in terms of "grams per 100 milliliters" of the packing medium; except that salt in chow chow is determined and results expressed in terms of "grams per 100 grams" of product.

(e) *Acid.* Acid is determined by titration with standard sodium hydroxide solution, using phenolphthalein indicator; and the total acidity (calculated as lactic or acetic, as the case may be) is expressed in terms of "grams per 100 milliliters" of the packing medium; except that acid in chow chow is determined and results expressed in terms of "grams per 100 grams" of product.

§ 52.1697 Definition of equalization.

(a) *General.* The equalization of the soluble solids between the pickle ingredient and packing medium is brought about by natural or simulated means and the results of either is considered "after equalization" and is afforded the same significance.

(b) *Natural equalization.* A natural equalization of the finished product is brought about after a certain time has elapsed after processing and storage, as follows:

(1) *Sweetened pickles.* Sweetened pickles with nutritive sweetening ingredient(s) are considered to be equalized 15 days or more after packing.

(2) *Sour and dill pickles.* Sour and dill pickles are considered to be equalized 10 days or more after packing.

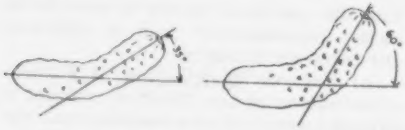
(c) *Simulated equalization.* This is a method of simulating equalization by comminuting the finished product in a mechanical blender, filtering the suspended material from the comminuted mixture and making the required test on the filtrate.

(1) *All styles and types of pickles.* (i) On all size containers the entire sample (pickle ingredient and packing medium) is used with an equal weight of distilled water. Cut the large units of pickle ingredient into smaller sections prior to placing in a blender. Comminute the mixture for about two minutes. Strain through a U.S. Standard No. 20 sieve (0.841 mm opening) and when necessary further filter to obtain a clear sample and make desired analytical determinations on filtrate. After appropriate calculation and corrections have been made multiply the reading by 2 to obtain the final values for Baume, Brix, Salometer, salt (NaCl), and acidity.

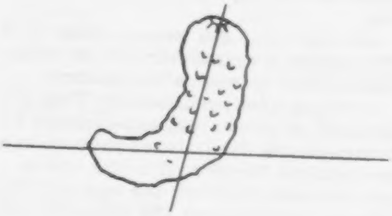
(ii) Analytical determinations for some pickles may be made from the undiluted slurry without prior addition of water during blending. Such values are direct and are not multiplied by 2 to obtain final values.

§ 52.1698 Definitions and measurement of pickles.

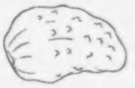
(a) *Curved pickle.* A curved pickle is one that is curved at an angle of 35 to 60 degrees when measured as illustrated.

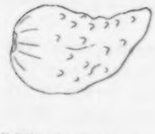


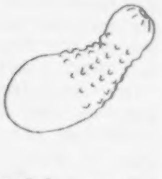
(b) *Crooked pickle.* A crooked pickle is one that is curved at an angle greater than 60 degrees, similar to the following illustration:



(c) *Misshapen pickles.* Misshapen pickles include crooked, nubbins, and otherwise misshapen pickles. A nubbin pickle is one that is not cylindrical in form, is short and stubby, or is not well developed. Nubbins and otherwise misshapen pickles are similar to illustrations that follow:







§ 52.1699 Methods of determining quantity of pickle ingredient.

(a) *Direct displacement (overflow-can method).* (1) This method may be used for all types of pickles except relish. The can is a No. 10 or 1 to 2 gallon size with an overflow spout constructed from ⅛ to ³⁄₁₆ inch inside diameter metal tubing. The tubing is soldered to opening inside of can about 1 inch from bottom and is bent upward parallel to sides. The tube is bent over and slightly downward from the can at upper end to form a spout about 1½ inches below top of can. The lower tip end of the spout is lower than the inside lower curve of the spout (point A). The upper tip end of the spout is higher than the inside lower curve of the spout (point A). The upper tip end of the spout is slightly shorter than the lower tip end of the spout. A brace near the top of the can holds tubing firmly in place. A woven wire basket made from screen wire with about 8 meshes to the inch with a handle is used for lowering the pickle ingredient into the overflow can.

(2) Place overflow can on level table so that overflow will discharge into sink. Fill overflow can with water at room temperature (approximately 20° C., 68° F.). Place empty basket into filled overflow can.

(3) When overflow ceases, place beaker or graduated cylinder under spout. Remove basket and place drained pickle ingredient (at room temperature) in basket and lower slowly into overflow can. When overflow ceases, record fluid overflow. The percent volume of pickle ingredient (volume occupied) is calculated for the declared container size as follows:

(Overflow/Declared fluid content of container)×100=percent volume of pickle ingredient

(4) Prior to determining the percent volume of pickle ingredient for chow chow pickles the drained pickle ingredient is prepared as follows: Empty the contents of the container upon a U.S. Standard No. 8 sieve of proper diameter so as to distribute the product evenly. Wash off all adhering sauce under a spray of water at a temperature of approximately 20° C. (68° F.). Incline the sieve to facilitate drainage and allow to drain for 2 minutes.

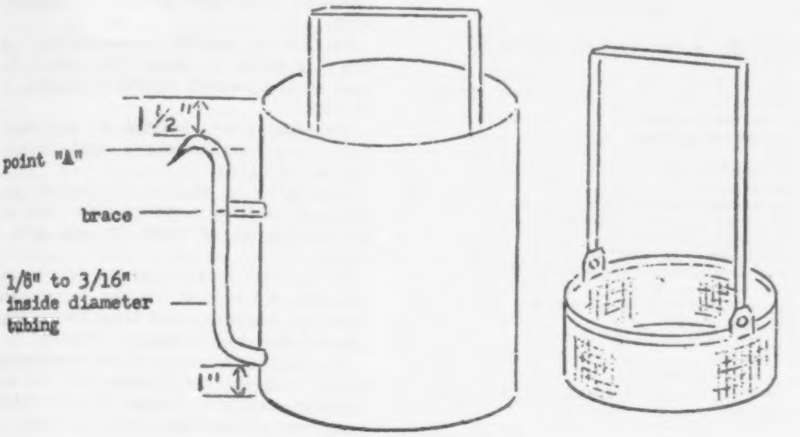
(b) *Drained weight/volume.* The percent weight/volume (w/v) of relish shown in Table III, is determined as follows:

(1) The drained weight of pickle relish of all types is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch ±3

percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and the pickles less the weight of the dry sieve. A sieve 8 inches in diameter is used for 1 quart and smaller size containers and a sieve with 12 inches in diameter is used for containers larger than 1 quart in size.

(2) Minimum quantity of pickle ingredient is designated as percent weight/volume which for the purpose of these standards is calculated as follows:

(Drained weight avoirdupois ounces/Declared U.S. fluid ounce contents of container) × 100 = percent weight/volume of pickle ingredient



OVERFLOW CAN

LOT COMPLIANCE

§ 52.1700 Ascertaining the grade of a lot.

The grade of a lot of pickles covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

EXPLANATION OF WEIGHTS AND MEASURES

§ 52.1701 Units of weights and measures.

(a) The following approximate equivalents are for reference only. They are not intended to replace more comprehensive works of authoritative technical standards or publications.

(b) Fluid (liquid) measures.

1 U.S. fluid ounce (fl oz.) equals	29.573 milliliters (ml.) 1.041 Imperial fluid ounces
1 U.S. liquid gallon equals.	4 U.S. quarts. 128 U.S. fluid ounces. 3,785 milliliters (3.785 liters).
1 liter—(1) equals	0.833 Imperial gallon. 1,000 milliliters. 33.814 U.S. fluid ounces. 1.057 U.S. liquid quart. 0.26417 U.S. gallon. 0.21998 Imperial gallon.
1 Imperial liquid gallon equals.	160 Imperial ounces. 4 Imperial quarts. 4,546 milliliters (4.546 liters). 1.201 U.S. gallon.

(c) Mass or weight.

1 avoirdupois ounce equal	28.3495 grams. 0.028 kilograms.
1 avoirdupois pound equal	16 avoirdupois ounces. 453.592 grams. 0.453.592 kilograms.

1 kilogram equals	1,000 grams. 35.274 avoirdupois ounces. 2.205 avoirdupois pounds.

(d) Length.

1 inch equals	2.54 centimeters. 25.4 millimeters.
1 millimeter equals	0.03937 inch.
1 centimeter equals	0.3937 inch.

SCORE SHEET

§ 52.1702 Score sheet for pickles.

Size and kind of container ....
Container code or marking ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Quantity pickle ingredient (v/v or w/v) ....
Type of pack ( ) cured; ( ) fresh-pack ....
Type of pickle (dill, sweet, sour, etc.) ....
Style of pickle (whole, sliced, etc.) ....
Density of sirup (degrees Baume or degrees Brix) ....
Acidity—grams per 100 grams or 100 ml ....
Salt (NaCl)—percent or degrees salometer ....
Size, count (if whole) ....
Ingredients (if mixed or chow chow):
  Cucumbers ....
  Onions ....
  Other ....
  Cauliflower ....
  Peppers ....

Factors		Score points	
Color	20	(A)	18-20
		(B)	[1] 16-17
		(SStd.)	[1] 0-15
Uniformity of size.	20	(A)	18-20
		(B)	16-17
		(SStd.)	[2] 0-15
Defects	30	(A)	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Texture	30	(A)	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Total score	100		

Flavor: ( ) Good; ( ) Reasonably good; ( ) Off flavor ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Pineapple

SOURCE: 55 FR 3031, Jan. 30, 1990, unless otherwise noted.

§ 52.1711 Product description.

Canned pineapple is the product represented as defined in the Standards of Identity, Quality, and Fill of Container for Canned Pineapple (21 CFR 145.180 and 145.181) issued under the Federal Food, Drug, and Cosmetic Act.

§ 52.1712 Styles.

(a) *Whole* consists of whole fruit peeled and cored into reasonably symmetrical pineapple cylinders with both ends cut perpendicular to the cylinder axis.

(b) *Slices* consist of uniformly cut circular slices or rings cut across the axis of the peeled, cored pineapple cylinders.

(c) *Half slices* consist of uniformly cut, approximately semi-circular halves of slices.

(d) *Broken slices* consist of arc-shaped portions which are not required to be uniform in size and/or shape.

(e) *Spears* consist of predominantly 65 mm (2.5 in), or longer, slender sectors cut radially and lengthwise from peeled cored pineapple cylinders.

(f) *Tidbits* consist of predominantly 8 mm (0.31 in) to 13 mm (0.51 in), reasonably uniform wedge-shaped sectors cut from slices or portions thereof.

(g) *Chunks* consist of short, thick units cut from slices and/or from peeled, cored pineapple, are predominantly more than 13 mm (0.51 in) in both thickness and width, and less than 38 mm (1.5 in) in length.

(h) *Cubes* consist of reasonably uniform, cube-shaped units, predominantly 14 mm (0.55 in) or less in the longest edge dimension.

(i) *Crushed* consists of finely cut, finely shredded or grated, or small diced pieces of canned pineapple.

§ 52.1713 Definition of terms.

In these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Acid* means the grams of anhydrous critic acid in 100 mL of the liquid drained from the product 15 days or more after the pineapple is canned, or the blended homogenized slurry of the comminuted entire contents of the container when measured less than 15 days after canning.

(b) *Blemish* means surface areas and spots which contrast strongly in color or texture with the normal pineapple tissue, and are in excess of 2 mm (0.08 in.) in the longest dimension of the exposed surface of the unit. Blemishes include deep fruit eyes, fragments of shell, brown spots, bruised portions and other abnormalities that are possible to detect in good commercial practice before sealing in the containers. In crushed pineapple the term applies to each fragment of crushed pineapple that bears a blemish. *Serious blemish* means that the blemish seriously affects the appearance or edibility of the unit.

(c) *Brix measurement* means the total soluble solids content of the product corresponding to a pure sucrose solution of the same specific gravity. It is measured 15 days or more after canning (natural equalization) or less than 15 days after canning on the blended homogenized slurry of the comminuted entire contents of the container (simulated equalization).

(d) *Broken unit* means that the whole slice is severed from the core hole to the outer circumference.

(e) *Character* refers to the degree of ripeness and maturity, the texture of the fruit, and the degree of freedom from core material.

(1) *Good character* (applies to all styles) means the units are of practically uniform ripeness, are reasonably firm with fruitlets appearing as a compact structure, are reasonably free from porosity and there is not more than 11 g (0.4 oz) of core material contained in one pound of drained fruit. Half slices or broken slices that fall within this classification shall not be graded above U.S. Grade C, regardless of the total score for the product.

(2) *Reasonably good character* (applies to all styles) means the units are of reasonably uniform ripeness, the fruitlets are reasonably compact in structure, are fairly free from porosity, and there is not more than 31 g (1.1 oz) of core material contained in one pound of drained fruit. Canned pineapple that falls within the classification defined as "reasonably good character" shall not be graded above U.S. Grade B, regardless of the total score for the product. Half slices or broken slices styles that fall within this classification shall not be graded above U.S. Grade C, regardless of the total score for the product.

(3) *Fairly good character* (applies only to half slices or broken slices styles) means the units are of fairly uniform ripeness, the fruitlets are fairly compact in structure, the units are fairly free from porosity, and there is not more than 31 g (1.1 oz) of core material contained in one pound of drained fruit. Half slices or broken slices that fall within this classification shall not be graded above U.S. Grade C, regardless of the total score for the product.

(4) *Poor character* means product that fails to meet the requirements of "reasonably good" or "fairly good character" as applicable for the style. Canned pineapple that falls within this classification shall not be graded above Substandard, regardless of the total score for the product.

(f) *Chip* means any unit in cubes style that is less than 8 mm (0.31 in) in the greatest dimension.

(g) *Color* refers to the predominantly varietal characteristic color of properly ripened and properly processed pineapple.

(1) *Good color* (applies to all styles) means that the color of the canned pineapple units or mass is bright and is characteristic of properly ripened and properly processed pineapple of similar varieties; and that there may be slight variations in shades of such characteristic color in the units, within each unit or within the mass, and that white radiating streaks may be present: *Provided*, that such variations do not materially affect the appearance or edibility of the product. Half slices or broken slices styles that fall within this classification shall not be graded above U.S. Grade C, regardless of the total score for the product.

(2) *Reasonably good color* (applies to all styles) means that the color of the canned pineapple units or mass may be no more than slightly dull but is characteristic of properly ripened and properly processed pineapple of similar varieties; and that there may be marked variations in shades of such

characteristic color in the units, within each unit, or within the mass, and that white radiating streaks may be present: *Provided*, That such variations do not seriously affect the appearance or edibility of the product. Canned pineapple that falls within this classification shall not be graded above U.S. Grade B, regardless of the total score for the product, except half slices or broken slices styles which shall not be graded above U.S. Grade C, regardless of the total score for the product.

(3) *Fairly good color* (applies only to half slices or broken slices styles) means that the color of the canned pineapple units or mass may be dull, but is characteristic of properly ripened and properly processed pineapple of similar varieties; and, that there may be marked variations in shades of such characteristic color in the units, within each unit, or within the mass, and that white radiating streaks may be present which may seriously affect the appearance or edibility of the product. Half slices or broken slices styles of canned pineapple that fall within this classification shall not be graded above U.S. Grade C, regardless of the total score of the product.

(4) *Poor color* (applies to all styles) means product that fails to meet the requirement of "reasonably good color" or "fairly good color," as applicable for the style. Product that falls within this classification shall not be graded above Substandard, regardless of the total score for the product.

(h) *Core material* means the pineapple portion which is identified as definitely hard and characteristic of the center structure of pineapple, normally removed during processing.

(i) *Defect* refers to the degree of freedom, for the applicable style, from trimmed units, blemished units, mashed units and from any other defects, including specks, in crushed style, that cannot be weighed which detract from the appearance or edibility of the product.

(1) *Practically free from defects* (applies to all styles) means that the canned pineapple is practically free from any defects including defects not specifically mentioned. Practically free from defects means, for the respective styles:

(i) *Whole*. Not more than 10 percent, by count, of the fruit units (cylinders) may be slightly trimmed, based on the average of all containers in the sample; not more than 10 percent by count of the fruit units (cylinders) may have an area greater than 7 percent of the total surface area which is mashed; however, a sample having less than 10 containers is permitted to have one slightly trimmed unit and one unit with more than 7 percent of the surface area mashed. Not more than 2 blemishes, including serious blemishes, per fruit unit (cylinder) is permitted.

(ii) *Slices*. Not more than an occasional unit may be insignificantly or slightly trimmed, and no slices may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished, including seriously blemished; or one unit in a container is permitted to be blemished, including seriously blemished if such unit exceeds the allowance of 5 percent, by count: *Provided*, That in all containers comprising the sample, such blemished units, including seriously blemished units, do not exceed an average of 5 percent of the total number of units. Not more than one unit in containers of less than 25 units, or not more than three units in containers of 25 units or more, may be mashed.

(iii) *Tidbits*. Not more than 5 percent of the drained weight may consist of units that are excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished, including seriously blemished: *Provided*, That not more than 2½ percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 150 units, or not more than 2 percent of the units in containers of 150 or more, may be mashed.

(iv) *Chunks*. Not more than a total of 5 percent, by count, of the units may be blemished and seriously blemished: *Provided*, That not more than 2½ percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 70 units, or not more than 5 percent of the units in containers of 70 units or more, may be mashed.

(v) *Cubes.* Not more than a total of 2 percent of the drained weight may be blemished and seriously blemished: *Provided,* That not more than 1 percent of the drained weight may be seriously blemished.

(vi) *Spears.* Not more than a reasonable amount of units may be insignificantly or slightly trimmed, but none may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished and seriously blemished, or one unit in a container is permitted to be blemished or seriously blemished if such unit exceeds the allowance of 5 percent, by count: *Provided,* That in all containers comprising the sample, such blemished units and seriously blemished units do not exceed an average of 5 percent of the total number of units. Not more than one unit per container may be mashed.

(vii) *Crushed.* Not more than ½ percent of the drained weight may consist of fragments bearing blemishes, including seriously blemished fragments. Defects also include dark specks that cannot be weighed, yet affect the appearance or edibility of the product

(viii) *Half slices.* Not more than a reasonable amount of units may be insignificantly or slightly trimmed, but none may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished, including seriously blemished, or one unit in a container is permitted to be blemished or seriously blemished if such unit exceeds the allowance of 5 percent, by count: *Provided,* That in all containers comprising the sample, such blemished and seriously blemished units do not exceed an average of 5 percent of the total number of units. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed. Product that falls into this classification, shall not be graded above U.S. Grade C, regardless of the total score for the product.

(ix) *Broken slices.* Not more than 5 percent, by count, of the units may be excessively trimmed. Not more than a total of 5 percent, by count, of the units may be blemished and seriously blemished. Not more than 5 percent of the units, by count, of the units may be mashed. Product that falls into this classification, shall not be graded above U.S. Grade C, regardless of the total score for the product.

(2) *Reasonably free from defects* (applies to all styles) means that the canned pineapple is reasonably free from any defects, including defects not specifically mentioned. Except for half slices and broken slices styles, product that falls into this classification, shall not be graded above U.S. Grade B, regardless of the total score for the product. Reasonably free from defects means, for the respective styles:

(i) *Whole.* Not more than 10 percent, by count, of the fruit units (cylinders) may be excessively trimmed, based on the average of all containers in the sample; not more than 10 percent, by count, of the fruit units (cylinders) may have an area greater than 10 percent of the total surface area which is mashed; however, a sample having less than 10 containers is permitted to have one excessively trimmed unit and one unit with more than 10 percent of the surface area mashed. Not more than 3 blemishes and serious blemishes per fruit unit (cylinder) is permitted.

(ii) *Slices.* Not more than a total of 20 percent, by count, of the units may be slightly and excessively trimmed: *Provided,* That not more than 7½ percent, by count, of the units may be excessively trimmed; but in any container having not more than 10 units, one unit may be excessively trimmed; and in any container having more than 10 units, but not more than 27 units, two units may be excessively trimmed. Not more than a total of 12½ percent, by count, of the units may be blemished and seriously blemished; but in any container having not more than 5 units, one unit may be blemished or seriously blemished; in containers having more than 5 units, but not more than 10 units, two units may be blemished or seriously blemished; and in containers having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed.

(iii) *Tidbits.* Not more than 15 percent of the drained weight may consist of units that are excessively trimmed. Not more than a total of 12½ percent, by count, of the units may be blemished and seriously blemished: *Provided,* That not more than 6¼ percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 150 units, or not more than 2 percent of the units in containers of 150 units or more, may be mashed.

(iv) *Chunks.* Not more than a total of 12½ percent, by count, may be blemished and seriously blemished: *Provided,* That not more than 6¼ percent, by count, may be seriously blemished. Not more than 3 of the units in containers of less than 70 units, or not more than 5 percent of the units or more, may be mashed.

(v) *Cubes.* Not more than a total of 12½ percent, by count, of the units may be blemished and seriously blemished; *Provided,* that not more than 6¼ percent, by count, may be seriously blemished.

(vi) *Spears.* Not more than a total of 20 percent, by count, of the units may be insignificantly, slightly, and excessively trimmed: *Provided,* That not more than 15 percent, by count, of the units may be excessively trimmed. Not more than 12½ percent, by count, of the units may be blemished and seriously blemished; but in any container having not more than 5 units, one unit may be blemished or seriously blemished; in containers having more than 5 units, but not more than 10 units, two units may be blemished and seriously blemished; and in containers having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than one unit per container may be mashed.

(vii) *Crushed.* Not more than 1¼ percent of the drained weight may consist of blemished and seriously blemished fragments.

(viii) *Half slices.* Not more than a total of 20 percent, by count, of the units may be slightly and excessively trimmed: *Provided,* That not more than 7½ percent, by count, of the units may be excessively trimmed; but in any container having not more than 10 units, one unit may be excessively trimmed; and in any container having more than 10 units but not more than 27 units, two units may be excessively trimmed. Not more than a total of 8 percent, by count, of the units may be blemished and seriously blemished; or one unit in a container is permitted to be blemished or seriously blemished if such unit exceeds the allowance of 8 percent, by count: *Provided,* That in all containers comprising the sample such blemished and seriously blemished units do not exceed an average of 8 percent of the total number of units. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed. Product that falls within this classification, shall not be graded above U.S. Grade C, regardless of the total score for the product.

(ix) *Broken slices.* Not more than 10 percent, by count, of the units may be excessively trimmed. Not more than 8 percent, by count, of the units may be blemished or seriously blemished. Not more than 5 percent, by count, of the units may be mashed. Product that falls into the classification, shall not be graded above U.S. Grade C, regardless of the total score for the product.

(3) *Fairly free from defects* (applies only to half slices or broken slices styles) means that the canned pineapple is "fairly free from defects," including detects not specifically mentioned. Half slices or broken slices styles that fall into this classification, shall not be graded above U.S. Grade C, regardless of the total score for the product, and, in addition, has the following meanings with respect to the following styles of canned pineapple:

(i) *Half slices.* Not more than 7½ percent, by count, of the units may be excessively trimmed; but in any container having not more than 10 units, one unit may be excessively trimmed; and in any container having more than 10 units, but not more than 27 units, two units may be excessively trimmed. Not more than 12½ percent, by count, of the units may be blemished and seriously blemished, but in any container having not more than 5 units, one unit may be blemished or seriously blemished; in containers having more than 5 units, but not more than 10 units, two units may be blemished and seriously blemished; and in containers having more than 10 units, but not more than 32 units, four units may be blemished and seriously blemished. Not more than one unit in containers of 25 units or less, and not more than 3 units in containers of more than 25 units, may be mashed.

(ii) *Broken slices.* Not more than 15 percent, by count, of the units may be excessively trimmed. Not more than 12½ percent, by count, of the units may be blemished and seriously blemished; but in any container having more than 10 units, but not more than 32 units, four units may blemished and seriously blemished. Not more than 5 percent, by count, of the units may be mashed.

(4) *Excessive defects* means canned pineapple which fails to meet either "reasonably free from defects" or "fairly free from defects," as applicable for the style. Product that falls into this classification shall not be graded above Substandard, regardless of the total score for the product.

(j) *Eye* means the blossom cup of the pineapple that is normally removed during processing (see blemish).

(k) *Extraneous vegetable material* (EVM) means any objectional vegetable material regardless of size, from other than the pineapple fruit, which is harmless.

(l) *Flavor and odor*—(1) *Good flavor and odor* means that the flavor and odor is normal for canned pineapple and is free from objectionable flavors and odors of any kind.

(2) *Fairly good flavor and odor* means that the flavor and odor may be lacking in good flavor and odor, but is free from objectionable flavors and odors of any kind.

(m) *Mashed* (in styles other than cube or crushed) means a unit that has lost its normal shape as evidenced by marks of mechanical injury. A unit that has lost its normal shape because of ripeness and which bears no mark of mechanical injury shall not be considered as "mashed."

(n) *Porosity* means the degree of freedom from air spaces in the pineapple unit that gives a spongy texture.

(o) *Sample unit size* means the amount of product specified to be used for grading.

(p) *Shell* means all the outer layer of the fruit that is normally removed during processing (see blemish).

(q) *Tartness* means the taste sensation that is biting, sharp, and sour which is characteristic of the pineapple fruit.

(1) *Excessively tart* means that more than 1.35 g of acid is present in 100 mL of the drained liquid.

(2) *Not excessivelyt tart* means that not more than 1.35 g of acid is present in 100 mL of the drained liquid.

(r) *Trim* means the degree of impairment of the pineapple units from the paring, coring, cutting or trimming process.

(1) *Insignificantly trimmed* means any trimming that is noticeable but of lesser degree than slightly trimmed.

(2) *Slightly trimmed* (applies only to whole, slices, or half slices styles) means that the portion trimmed away approximates 3 percent to not more than 5 percent of the apparent physical bulk of the perfectly formed unit and if such trimming materially affects the normal circular shape of the outer or edge of the unit.

(3) *Excessively trimmed* in whole, slices, or half slices styles means that the portion trimmed away exceeds 5 percent of the apparent physical bulk of the perfectly formed unit and if such trimming destroys the normal circular shape of the outer or inner edge of the unit. In broken slices, spears, or tidbits means that the normal shape of the unit is destroyed by trimming.

(s) *Uniformity of size and shape* is not scored for crushed style. The other three factors (color, defects, and character) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score for crushed style canned pineapple. For broken slices style, this quality factor may be scored no higher than 15 points. The four factors (color, uniformity of size and shape, defects, and character) are scored and the total is multiplied by

100 and divided by 95, dropping any fractions to determine the total score for broked slices.

(1) *Radial axis* in whole, slices, and half slices styles, means the measurement along the radius from the inside arc to the outside arc.

(2) *Length*—(i) In tidbits and chunks styles, means the measurement along the radius from the inside arc to the outside arc.

(ii) In spears style, means the longitudinal measurement of the spear.

(3) *No. 8 sieve* means the meshes of a sieve designated in the American Society for Testing and Materials (ASTM) Standard E-11, Standards for Specifications for Wire Cloth Sieves for Testing Purposes.

(4) *Practically uniform in size and shape* means for the following styles:

(i) *Whole.* The maximum radial axis of the cylinder does not exceed the minimum radial axis of the cylinder by more than 6 mm (0.25 in). The cylinder may be cracked but not broken into separate pieces.

(ii) *Slices.* The diameter of the largest slice does not exceed the diameter of the smallest slice by more than 2 mm (0.08 in). The thickest slice does not exceed the thinnest slice by more than 2 mm (0.08 in) in thickness. The maximum radial axis of any slice does not exceed the minimum radial axis of the same slice by more than 3 mm (0.12 in). The drained weight of the largest slice is not more than 1.4 times the drained weight of the smallest slice.

(iii) *Tidbits.* Not more than 7½ percent of the drained weight may consist of units each of which weighs less than three-fourths as much as the average weight of all the untrimmed tidbits.

(iv) *Chunks.* None of the units may have a longest dimension (along any edge) greater than 38 mm (1.5 in). Not more than 10 percent of the drained weight consists of pieces weighing less than 5 g (0.18 oz) each.

(v) *Cubes.* Not more than an aggregate of 10 percent of the drained weight may consist of units of such size that they pass through the meshes of a sieve with 5/16 in) square openings, and pieces weighing more than 3 g (0.11 oz) each.

(vi) *Spears.* The units are of substantially equal length. Not more than 10 percent, by count, of the units or not more than one unit in a container of less than 10 units, may be less than 19 mm (0.75 in) or more than 45 mm (1.75 in) in the longest edge dimension other than the longitudinal measurement of the spear. The drained weight of the largest spear is not more than 1.4 times the weight of the smallest spear.

(vii) *Half slices.* The diameter of the largest half slice does not exceed the diameter of the smallest half slice by more than 2 mm (0.08 in). The thickest half slice does not exceed the thinnest half slice by more than 2 mm (0.08 in.). The drained weight of the largest half slice is not more than 1.75 times the drained weight of the smallest half slice (except for an occasional broken piece due to splitting or an occasional whole slice not quite completely cut through).

(5) *Reasonably uniform in size and shape* (applies to all styles except broken and crushed styles). Except for half slices style, the applicable styles of canned pineapple that fall into this classification, shall not be graded above U.S. Grade B, regardless of the total score for the product. Reasonably uniform in size and shape has the following meanings with respect to style:

(i) *Whole.* The maximum radial axis of the cylinder does not exceed the minimum radial axis of the cylinder by more than 10 mm (0.39 in). The cylinder may be cracked but not broken into separate pieces.

(ii) *Slices.* The diameter of the largest slice does not exceed the diameter of the smallest slice by more than 3 mm (0.12 in). The thickest slice does not exceed the thinnest slice by more than 3 mm (0.12 in) in thickness. The maximum radial axis of any slice does not exceed the minimum radial axis of the same slice by more than 6 mm (0.25 in). The drained weight of the largest slice is not more than 1.4 times the drained weight of the smallest slice.

(iii) *Tidbits.* Not more than 15 percent of the drained weight may consist of units each of which weighs less than three-fourths as much as the average weight of all the untrimmed tidbits.

(iv) *Chunks.* None of the units may have a longest dimension (along any edge) greater than 38 mm (1.5 in). Not more than 15 percent of the drained weight consists of pieces weighing less than 5 g (0.18 oz) each.

(v) *Cubes.* Not more than 10 percent of the drained weight may consist of units of such size that they pass through the meshes of a sieve with 8 mm (0.31 in) square openings. Not more than 15 percent of the drained weight may consist of pieces weighing more than 3 g (0.11 oz) each.

(vi) *Spears.* The units are of reasonably uniform length. Not more than 20 percent, by count, of the units or not more than one unit in a container of less than 5 units, may be less than 19 mm (0.75 in) or more than 45 mm (1.75 in) in the longest edge dimension other than the longitudinal measurement of the spear. The drained weight of the largest spear is not more than 1.4 times the weight of the smallest spear.

(vii) *Half slices.* The diameter of the largest half slice does not exceed the diameter of the smallest half slice by more than 3 mm (0.12 in). The thickest half slice does not exceed the thinnest half slice by more than 3 mm (0.12 in.) in thickness. The drained weight of the largest half slice is not more than 1.75 times the drained weight of the smallest half slice (except for an occasional broken piece due to splitting or occasional whole slice not quite completely cut through). Product that falls within this classification shall not be graded above U.S. Grade C, regardless of the total score for the product.

(6) *Fairly uniform in size and shape* (applies only to the style of half slices) means that the units fail to meet the requirements of "reasonably uniform in size and shape" and shall not be graded above U.S. Grade C, regardless of the total score for the product. The drained weight of the largest half slice is not more than 1.75 times the weight of the smallest half slice (except for an occasional broken piece due to splitting or an occasional whole slice not quite completely cut through).

(7) *Not uniform in size and shape* (applies only to broken slices style) means:

(i) Not more than 10 percent of the drained weight may consist of pieces having an arc of less than 90 degrees.

(ii) Not more than 5 percent of the drained weight may consist of pieces that measure in thickness less than 8 mm (0.31 in) or more than 25 mm (1 in); or pieces that measure less than 19 mm (0.75 in) in width as measured from the outer edge to the inner edge; and

(iii) Not more than 5 percent of the drained weight may consist of broken slices having an outside diameter differing by as much as 10 mm (0.39 in) from those present in the greatest proportion by weight.

(8) *Poor uniformity of size and shape* (applies to all styles except crushed style) means canned pineapple which fails to meet in some respect: "reasonably uniform in size and shape," "fairly uniform in size and shape, or "not uniform in size and shape," as applicable for the style. Product that falls into this classification shall not be graded above Substandard, regardless of the total score for the product.

(t) *Unit* means one whole cylinder, slice, half slice, broken slice, spear, tidbit, chunk, cube or a specified weight of crushed pineapple.

[55 FR 3031, Jan. 30, 1990; 55 FR 5541, Feb. 15, 1990]

§ 52.1714 Recommended sample unit sizes.

The requirements for all factors of quality and analysis are based on the following:

(a) The entire contents of a container;

(b) A representative portion of the contents of a container;

(c) A combination of the contents of two or more containers of the same item; or

(d) A representative portion of processed product stored or held in bulk containers.

§ 52.1715 Brix measurements.

Cut-out requirements for liquid packing media in canned pineapple are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurements, as applicable to the respective designations, are as follows:

TABLE I.—PACKING MEDIA DESIGNATIONS

Designations	Brix measurement
"Extra heavy sirup"; "extra heavily sweetened pineapple juice and water"; or "extra heavily sweetened pineapple juice".	22° or more, but not more than 35°
"Heavy sirup"; "heavily sweetened pineapple juice and water"; or "heavily sweetened pineapple juice".	18° or more, but less than 22°
"Light sirup"; "lightly sweetened pineapple juice and water"; or "lightly sweetened pineapple juice".	14° or more, but less than 18°
"Slightly sweetened water"; "extra light sirup"; "slightly sweetened pineapple juice and water"; or "slightly sweetened pineapple juice".	10° or more, but less than 14°
"In water" (except crushed style)	Not applicable
"In pineapple juice"	Not applicable
"In pineapple juice and water"	Not applicable
"In clarified pineapple juice"	Not applicable
"Artificially sweetened"	Not applicable

[55 FR 3031, Jan. 30, 1990; 55 FR 5541, Feb. 15, 1990]

§ 52.1716 Fill of container for crushed style canned pineapple.

(a) The standard of fill of container for canned crushed pineapple is a fill of not less than 90 percent of the total water capacity of the container. Crushed style canned pineapple that does not meet this requirement is "Below Standard in Fill."

(b) The recommended fill of container for canned pineapple, other than crushed style canned pineapple, is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of canned pineapple of all styles except crushed style canned pineapple be as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.1717 Minimum drained weights for canned crushed pineapple.

(a) *General.* The minimum drained weights for crushed style canned pineapple are not incorporated in the grades of the finished product since drained weight is not a factor of quality for the purpose of these grades; however, minimum drained weights for crushed style canned pineapple other than "heavy pack" or "solid pack" are standards of quality, and minimum drained weights for crushed style "heavy pack" and "solid pack" canned pineapple are standards of identity under the Federal Food, Drug, and Cosmetic Act. Crushed style canned pineapple, other than "heavy pack" or "solid pack", which is less than 63 percent of the net weight of the contents of the container is:

(1) Below standard in quality, good food—not high grade; or

(2) Below standard in quality, contains excess liquid.

(b) The minimum drained weights for crushed canned pineapple are shown in Table II of this section.

TABLE II—MINIMUM DRAINED WEIGHTS FOR CRUSHED STYLE CANNED PINEAPPLE

Container	Other than "heavy pack" or "solid pack" crushed.	"Heavy pack" crushed.	"Solid pack" crushed.
Any Container Size	Drained fruit: not less than 63 percent, by weight, of net contents.	Drained fruit: not less than 73 percent but less than 78 percent, by weight, of net contents.	Drained fruit: not less than 78 percent of net contents.

[55 FR 3031, Jan. 30, 1990; 55 FR 5541, Feb. 15, 1990; 55 FR 19001, May 7, 1990]

§ 52.1718 Recommended minimum drained weights for canned pineapple (other than crushed style canned pineapple).

(a) There are no recommended drained weight minimums for whole style canned pineapple since fill for this style is based on volume.

(b) *General.* The recommended minimum drained weights for canned pineapple in styles other than crushed and whole are based on equalization of the product 15 days or more after the product has been canned. The recommended minimum drained weights for canned pineapple in styles other than crushed and whole are not incorporated in the grades of the finished product, since drained weight is not a factor of quality for the purposes of these grades.

(c) *Method for ascertaining drained weight in canned pineapple (including canned crushed pineapple).* The drained weight is determined by emptying the contents of a container upon a United States Standard No. 8 circular sieve of proper diameter so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes. The drained weight is the weight of the sieve and pineapple less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalence of No. 3 size cans (404 X 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(d) Recommended minimum drained weights of canned pineapple in styles other than crushed or whole style are shown in Table III of this section.

TABLE III.—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR STYLES OF CANNED PINEAPPLE

[Other Than Crushed or Whole Style]

Container designation	Container dimension	Style	With sirup density 14° Brix or more	With sirup density less than 14° Brix
	(inches)		(ounces)	(ounces)
No. 1 Flat	307 x 203	All styles	4.9	4.7
8 oz Tall	211 x 304	All styles	5.0	4.8
211 Cyl.	211 x 414	All styles	7.7	7.4
No. 1¼	401 x 207.5	All styles	8.7	8.2
No. 1½	307 x 309	All styles	9.4	8.9
No. 2	307 x 409	All styles	12.3	11.7
No. 2½	401 x 411	All styles	17.8	17.0
No. 10	603 x 700	Chunks, Tidbits	65.7	63.6
No. 10	603 x 700	Slices	61.5	59.5
No. 10	603 x 700	Half slices and broken slices	62.5	60.5
No. 10	603 x 700	Cubes	67.4	64.1

(e) Conformance with the recommended minimum drained weights for canned pineapple other than crushed or whole style is determined by averaging the drained weights from all the containers which are representative of a specific lot and such lot is considered as meeting the minimum drain weight recommendations if the following criteria are met:

(1) The average of the drained weights from all of the containers in the sample meets the recommended drained weight;

(2) One-half or more of the containers meet the recommended drained weight; and

(3) The drained weights from the containers which do not meet the recommended minimum drained weights are within the range of variability for good commercial practice.

§ 52.1719 Grades.

(a) U.S. Grade A is the quality of canned pineapple that meets the applicable requirements of tables IV and VII of § 52.1721.

(b) U.S. Grade B is the quality of canned pineapple that meets the applicable requirements of tables IV and VII of § 52.1721.

(c) U.S. Grade C is the quality of canned pineapple that meets the applicable requirements of tables V and VI of § 52.1721.

(d) Substandard is the quality of canned pineapple that fails to meet the requirements for "U.S. Grade B" or "U.S. Grade C," as applicable for the style.

[55 FR 3031, Jan. 30, 1990; 55 FR 5541, Feb. 15, 1990]

§ 52.1720 Factors of quality and analysis.

(a) The grade of a lot of canned pineapple is based on evaluation and analysis of the product for the following scoreable quality, and non-scoreable quality and analytical factors:

(1) Color:

(2) Uniformity of size and shape (except crushed style):

(3) Defects;

(4) Character;

(5) Flavor and odor; and

(6) Tartness.

(b) The relative importance of each scoreable quality factor is expressed numerically on the scale of 0 to 100. The maximum number of points that may be given each factor is:

Quality factors	Points
Color	30
Uniformity of size and shape	20
Defects	20
Character	30
Total score	100

(c) The essential variations within each scoreable quality factor are so described that the value may be determined for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, 24 to 26 points means 24, 25, or 26 points) and the score points shall be prorated relative to the degree of excellence for each scoreable quality factor.

§ 52.1721 Requirements for grades.

TABLE IV.—CANNED PINEAPPLE—WHOLE, SLICES, SPEARS, TIDBITS, CHUNKS, CUBES

Quality factors and Description	Grade	Score point range
Color:		
Good	(A)	27-30
Reasonably Good	(B)	24-26 [1]
Poor	(SSTD)	0-23 [2]
Uniformity of size and shape:		
Practically uniform	(A)	18-20
Reasonably uniform	(B)	16-17 [1]
Poor Uniformity	(SSTD)	0-15 [2]
Defects:		
Practically Free	(A)	18-20
Reasonably Free	(B)	16-17 [1]
Excessive	(SSTD)	0-15 [2]
Character:		
Good	(A)	27-30
Reasonably Good	(B)	24-26 [1]
Poor	(SSTD)	0-23 [2]
Total Score (range)	(A)	90-100 points
	(B)	80-89 points
	(SSTD)	0-79 points
Flavor and Odor	(A)	Good
	(B)	Fairly good
	(SSTD)	Off Flavor
Tartness	(A)	Not excessively tart
	(B) (SSTD)	Excessively tart

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[1] Cannot be graded above U.S. Grade B, regardless of the total score for the product.

[2] Cannot be graded above Substandard, regardless of the total score for the product.

TABLE V.—CANNED PINEAPPLE—BROKEN SLICES

Quality factors and Description	Grade	Score point range
Color:		
Good		27-30 [1]
Reasonably Good	(C)	24-26 [1]
Fairly Good		21-23 [1]
Poor	(SSTD)	0-20 [2]
Uniformity of size and shape:		
Not Uniform	(C)	14-15 [1]
Poor Uniformity	(SSTD)	0-13 [2]
Defects:		
Practically Free		18-20 [1]
Reasonably Free	(C)	16-17 [1]
Fairly Free		14-15 [1]
Excessive	(SSTD)	0-13 [2]
Character:		
Good		27-30 [1]
Reasonably Good	(C)	24-26 [1]
Fairly Good		21-23 [1]
Poor	(SSTD)	0-20 [2]
Total Score (range) [3]	(C)	73-100 points
	(SSTD)	0-72 points
Flavor and Odor	(C)	Good fairly good
	(SSTD)	Off flavor
Tartness	(C)	Not excessively tart
	(SSTD)	Excessively tart

[1] Cannot be graded above U.S. Grade C, regardless of the total score for the product.

[2] Cannot be graded above Substandard, regardless of the total score for the product.

[3] To determine the total score, the four factors (Color, Uniformity, Defects, and Character) are scored and the total is multiplied by 100 and divided by 95, dropping any fractions.

TABLE VI.—CANNED PINEAPPLE—HALF SLICES

Quality factors and Description	Grade	Score point range
Color:		
Good		27-30 [1]
Reasonably Good	(C)	24-26 [1]
Fairly Good		21-23 [1]
Poor	(SSTD)	0-20 [2]
Uniformity of size and shape:		
Practically uniform		18-20 [1]
Reasonably uniform	(C)	16-17 [1]
Fairly Uniform		14-15 [1]
Poor Uniformity	(SSTD)	0-20 [2]
Defects:		
Practically Free		18-20 [1]
Reasonably Free	(C)	16-17 [1]
Fairly Free		14-15 [1]
Excessive	(SSTD)	0-13 [2]
Character:		
Good		27-30 [1]
Reasonably Good	(C)	24-26 [1]
Fairly Good		21-23 [1]
Poor	(SSTD)	0-20 [2]
Total score (range)	(C)	70-100 points
	(SSTD)	0-69 points
Flavor and odor	(C)	Good or fairly good
	(SSTD)	Off Flavor
Tartness	(C)	Not excessively tart
	(SSTD)	Excessively tart

[1] Cannot be graded above U.S. Grade C, regardless of the total score for the product.

[2] Cannot be graded above Substandard, regardless of the total score for the product.

TABLE VII.—CANNED PINEAPPLE—CRUSHED

Quality factors and Description	Grade	Score point range
Color:		
Good	(A)	27-30
Reasonably good	(B)	24-26 [1]
Poor	(SSTD)	0-23 [2]
Defects:		
Practically free	(A)	18-20
Reasonably free	(B)	16-17 [1]
Excessive	(SSTD)	0-15 [2]
Character:		
Good	(A)	27-30
Reasonably good	(B)	24-26 [1]
Poor	(SSTD)	0-23 [2]
Total Score (Range) [3]	(A)	90-100 points
	(B)	80-89 points
	(SSTD)	0-79 points
Flavor and odor	(A)	Good
	(B)	Fairly Good
	(SSTD)	Off Flavor
Tartness	(A)	Not excessively tart
	(B)	
	(SSTD)	Excessively tart

[1] Cannot be graded above U.S. Grade B, regardless of the total score for the product.

[2] Cannot be graded above Substandard, regardless of the total score for the product.

[3] To determine the total score, the other three factors (Color, Defects, and Character) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions.

[55 FR 3031, Jan. 30, 1990; 55 FR 5541, Feb. 15, 1990]

§ 52.1722 Sample size.

The sample size used to determine whether canned pineapple meets the requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

§ 52.1723 Lot quality and analytical requirements.

A lot of canned pineapple is considered as meeting the quality and analytical requirements if:

(a) The requirements specified in tables IV through VII, as applicable, are met; and

(b) The sampling plans and procedures in 7 CFR 52.1 through 52.83 are met.

Subpart—United States Standards for Grades of Frozen Pineapple

SOURCE: 18 FR 8037, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.1741 Product description.

Frozen pineapple is prepared from the properly ripened fruit of the pineapple plant (Ananas sativus or Ananas comosus); is peeled, cored, trimmed, and washed; may be packed with or without packing media; and is frozen and stored at temperatures necessary for the preservation of the product.

§ 52.1742 Styles of frozen pineapple.

(a) *Whole slices.* Frozen whole slices of pineapple consist of whole, practically unbroken slices of pineapple that have been cut, at a right angle to the longitudinal axis, into approximately equal units.

(b) *Half slices.* Frozen half slices of pineapple are such portions of whole slices of pineapple that are so matched in size and thickness that two portions are approximately equivalent to a slice.

(c) *Broken slices.* Frozen broken slices of pineapple consist of portions of slices of pineapple, if such portions are approximately of the same thickness and diameter.

(d) *Crushed.* Frozen crushed pineapple is pineapple that has been cut, shredded, or crushed into fine pieces.

(e) *Tidbits.* Frozen tidbits of pineapple are small, wedge-shaped sections cut from slices or portions of slices of pineapple.

(f) *Chunks.* Frozen chunks of pineapple are pieces of pineapple which do not conform to any of the foregoing styles, which need not be symmetrical nor uniform in size, and which do not exceed 1⅛ inches in any dimension.

§ 52.1743 Grades of frozen pineapple.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of whole slices, crushed, tidbits, or chunks that possess a practically uniform, bright, characteristic yellow color in the applicable style; are practically uniform in size and symmetry in the applicable style; are practically free from defects in the applicable style; possess a good character in the applicable style; possess a normal flavor and odor; and score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of whole slices, crushed, tidbits, or chunks that possess a reasonably uniform, good, characteristic yellow color in the applicable style; are reasonably uniform in size and symmetry in the applicable style; are reasonably free from defects in the applicable style; possess a reasonably uniform, reasonably good character in the applicable style; possess a normal flavor and odor; and score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of half slices and broken slices that are fairly uniform in size and symmetry; possess a fairly uniform, fairly good, characteristic yellow color or better color; are fairly free from defects; possess a fairly good character; possess a normal flavor and odor; and score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "U.S. Grade D" or "Substandard" is (1) the quality of whole slices, crushed, tidbits, or chunks that fail to meet the requirements of "U.S. Grade B" or "U.S. Choice"; or (2) the quality of half slices or broken slices that fail to meet the requirements of "U.S. Grade C" or "U.S. Standard."

FACTORS OF QUALITY

§ 52.1744 Ascertaining the grade.

(a) The grade of frozen pineapple is determined immediately after thawing to the extent that the mass or units may be easily separated. The grade of frozen pineapple may be ascertained by considering, in addition to the requirements of the respective grade, the following factors: Color, uniformity of size and symmetry, absence of defects, and character.

(b) The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Color	20
Uniformity of size and symmetry	20
Absence of defects	30
Character	30
Total score	100

(c) "Normal flavor and odor" means that the pineapple is free from objectionable flavors, off flavors, and objectionable odors of any kind.

§ 52.1745 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1746 Color.

(a) *(A) classification.* Whole slices, crushed, tidbits, or chunks that possess a practically uniform, bright, characteristic yellow color, may be given a score of 18 to 20 points. "Practically uniform, bright, characteristic yellow color" means that the frozen pineapple has a yellow color typical of frozen pineapple and that there may be some variation of such color in the mass or of the units.

(b) *(B) classification.* Whole slices, crushed, tidbits, or chunks that possess a reasonably uniform, good, characteristic yellow color, may be given a score of 16 or 17 points. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice," regardless of the total score for the product (this is a limiting rule). "Reasonably uniform, good, characteristic yellow color" means that the frozen pineapple may have considerable variation of such color in the mass or of the units.

(c) *(C) classification.* Half slices or broken slices that possess a fairly uniform, fairly good, characteristic yellow color or better color may be given a score of 14 or 15 points. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade C" or "U.S. Standard," regardless of the total score for the product (this is a limiting rule). "Fairly uniform, fairly good, characteristic yellow color," means that the individual units of the frozen pineapple may vary markedly from a uniform, typical yellow color and may be slightly dull in color.

(d) *(SStd) classification.* Frozen pineapple that possesses a grayish cast or is definitely dull or off-color for any reason, or that fails to meet the requirements of paragraphs (a), (b), or (c) of this section for the applicable style may be given a score of 0 to 13 points and shall not be graded above "U.S. Grade D" or "Substandard", regardless of the total score for the product (this is a limiting rule).

§ 52.1747 Uniformity of size and symmetry.

(a) *General.* The factor of uniformity of size and symmetry shall not be scored when grading frozen crushed pineapple or frozen chunks of pineapple. The other three factors shall be scored and the total shall be multiplied by 100 and divided by 80, dropping any fractions, to determine the total score.

(b) *(A) classification.* If the frozen pineapple units are practically uniform in size and symmetry, a score of 18 to 20 points may be given. "Practically uniform in size and symmetry" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Whole slices and tidbits.* All of the units within each style are the same apparent thickness, size, and

shape with not more than a slight deviation in actual dimensions.

(c) (*B*) *classification.* If the frozen pineapple units are reasonably uniform in size and symmetry, a score of 16 or 17 points may be given. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice," regardless of the total score for the product (this is a limiting rule). "Reasonably uniform in size and symmetry" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Whole slices and tidbits.* The units within each style may vary in thickness, size, and shape with more than a slight deviation in actual dimensions.

(d) (*C*) *classification.* If the frozen pineapple units consist of half slices or broken slices, a score of 14 or 15 points may be given. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade C" or "U.S. Standard," regardless of the total score for the product (this is a limiting rule).

§ 52.1748 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from blemished units; from excessively trimmed units; from broken units; and from crushed units. (See Table No. I of this subpart.)

(1) "Blemished units" are units of frozen pineapple with any fruit eye more than 1/32 inch in diameter, deep fruit eyes regardless of area, brown spots, peel, bruise, or other injury.

(2) "Excessively trimmed units" means that the units have been so trimmed that they do not retain their apparent original conformation.

(3) "Broken units" means that whole slices are definitely severed from core hole to perimeter.

(4) "Crushed units," except for crushed style, means that the units have been crushed to the extent that they are not of normal shape.

(b) (*A*) *classification.* Frozen pineapple that is practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Whole slices.* No units are crushed; no units are excessively trimmed; not more than 5 percent, by count, may be blemished; and not more than 10 percent, by count, may be broken in one place only. One blemished unit and one broken unit are permitted if one unit exceeds the respective allowance of 5 percent and 10 percent by count.

(2) *Tidbits and chunks.* Not more than 5 percent, by count, may be crushed and not more than 5 percent, by count, may be blemished.

(3) *Crushed.* Not more than ½ percent by weight, may be blemished units. In determining the weight of blemished material, the weight of the entire blemished piece is included and the percentage is based on the net weight of the pineapple.

(c) (*B*) *classification.* Frozen pineapple that is reasonably free from defects may be given a score of 24 to 26 points. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice," regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Whole slices.* Not more than 3 percent, by count, may be excessively trimmed; not more than 5 percent, by count, may be crushed; not more than 12½ percent, by count, may be blemished; and not more than 25 percent, by count, may be broken in one place only.

(2) *Tidbits and chunks.* Not more than 5 percent, by count, may be crushed; and not more than 12½ percent, by count, may be blemished.

(3) *Crushed.* Not more than 1 percent, by weight, may be blemished units. In determining the weight of blemished material, the weight of the entire piece is included and the percentage based on the net weight of the frozen pineapple.

(d) (*C*) *classification.* Frozen pineapple that is fairly free from defects may be given a score of 21 to 23 points. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade C" or "U.S. Standard," regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Half slices and broken slices.* Not more than 5 percent, by count, may be crushed; and not more than 12½ percent, by count, may be blemished. Since half slices and broken slices of frozen pineapple are whole slices broken in more than one place, these styles are scored in this classification and shall not be graded above "U.S. Grade C" or "U.S. Standard," regardless of the total score for the product (this is a limiting rule).

(e) *(SStd) classification.* Whole slices, crushed, tidbits, and chunks of pineapple that fail to meet paragraph (c) of this section; and half slices or broken slices of frozen pineapple that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above "U.S. Grade D" or Substandard, regardless of the total score for the product (this is a limiting rule).

(f) *Evaluation of score.* The evaluation of the score for the factor of absence of defects may be determined from Table No. I of this subpart which indicates the maximum allowances for each type of defect for the score indicated.

TABLE NO. 1—MAXIMUM ALLOWANCES FOR DEFECTS IN FROZEN PINEAPPLE

Grade	Score points	Whole slices (By count)				Crushed—Blemished units (By weight)	Half slices and broken slices (By count)		Tidbits and chunks (By count)	
		Crushed units	Excessively trimmed	Blemished units	Broken units		Crushed units	Blemished units	Crushed units	Blemished units
U.S. Grade A or U.S. Fancy.	30	None	None	2%	4%	¼%			2%	2%
	29	None	None	3%	6%	¼%			3%	3%
	28	None	None	4%	8%	½%			4%	4%
	27	None	None	5%	10%	½%			5%	5%
U.S. Grade B or U.S. Choice.	26	1%	1%	6%	15%	¾%			2%	6%
	25	3%	2%	9%	20%	¾%			3%	9%
	24	5%	3%	12½%	25%	1%			5%	12½%
U.S. Grade C or U.S. Standard.	23						1%	6%		
	22						3%	9%		
	21						5%	12½%		
U.S. Grade D or Substandard.	20 or less	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(3)	(3)

[1] More than allowances permitted for 24 points.
[2] More than allowances permitted for 21 points.
[3] More than allowances permitted for 24 points.

§ 52.1749 Character.

(a) *General.* The factor of character refers to the degree of ripeness and texture of the fruit.

(b) *(A) classification.* Frozen pineapple that possesses a good character may be given a score of 27 to 30 points "Good character" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Whole slices, tidbits, and crushed.* The fruit is of practically uniform ripeness and there may be present not more than 2½ percent, by weight of the pineapple, that is core material of fibrous stock; and, in the case of whole slices and tidbits, the fruit is reasonably firm and the fruitlets appear as a compact structure, reasonably free from porosity.

(2) *Chunks.* The fruit is of practically uniform ripeness and normally has had more of the fibrous portions around the core hole removed than is the case with other styles of pack; the fruit is reasonably firm and the fruitlets appear as a compact structure, reasonably free from porosity.

(c) (*B*) *classification.* Frozen pineapple that possesses a reasonably good character may be given a score of 24 to 26 points. Frozen pineapple which falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice," regardless of the total score for the product (this is a limiting rule). "Reasonably good character" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Whole slices, tidbits, and crushed.* The fruit is of reasonably uniform ripeness and there may be present not more than 5 percent, by weight of the pineapple, that is core material or fibrous stock; and, in the case of whole slices and tidbits, the fruitlets are reasonably compact in structure, fairly free from porosity.

(2) *Chunks.* The fruit is of reasonably uniform ripeness and normally has had more of the fibrous portions around the core hole removed than is the case with other styles of pack; and the fruitlets are reasonably compact in structure, fairly free from porosity.

(d) (*C*) *classification.* If the frozen pineapple possesses a fairly good character, a score of 21 to 23 points may be given. Frozen pineapple that falls into this classification shall not be graded above "U.S. Grade C" or "U.S. Standard" regardless of the total score for the product (this is a limiting rule) "Fairly good character" has the following meaning with respect to, and applies only to, the following styles of frozen pineapple:

(1) *Half slices and broken slices.* The texture may be variable and there may be present not more than 5 percent, by weight of the pineapple, that is core material of fibrous stock and the fruitlets may be flaccid and loosely constructed.

(e) (*SStd*) *classification.* Whole slices, crushed, tidbits, and chunks of pineapple that fail to meet paragraph (c) of this section; and half slices and broken slices that fail to meet the requirements of paragraph (d) of this section, may be given a score of 0 to 20 points and shall not be graded above "U.S. Grade D" or Substandard regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1750 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1751 Score sheet for frozen pineapple.

Size and kind of container ....
Container mark or identification............
Label (style of pack Ratio of fruit to sugar, etc., if shown).
Net weight ....
Style............
Count (of whole slices) ....

Factors			Score points
Color	20	(A)	18-20
		(B)	[1] 16-17
		(C)	[1] 14-15
		(D)	[1] 0-13
Uniformity of size and symmetry.	20	(A)	18-20
		(B)	[1] 16-17
		(C)	[1] 14-15
Absence of defects.	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(D)	[1] 0-20
Character	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(D)	[1] 0-20
Total score........	100		

Normal flavor and odor............
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Pineapple Juice

SOURCE: 52 FR 6130, Mar. 2, 1987, unless otherwise noted..

§ 52.1761 Product description.

(a) *Pineapple juice* is the product as defined in the Standards for Pineapple Juice (21 CFR 146.185), issued under the Federal Food, Drug, and Cosmetic Act.

(b) *Pineapple juice from concentrate* is the product as defined in the Standards for Pineapple juice (21 CFR 146.185), issued under the Federal Food, Drug, and Cosmetic Act.

§ 52.1762 Styles.

(a) Unsweetened.

(b) Sweetened.

§ 52.1763 Definitions of terms.

In these U.S. Standards, unless otherwise required by the context, the following terms shall be construed to mean:

(a) *Acid* means the grams of acid contained in 100 milliliters of the juice (calculated as anhydrous citric acid).

(b) *Brix* means the soluble solids content as determined by the method prescribed in the *Official Methods of Analysis of the Association of Official Analytical Chemists*—Solids by Means of Spindle (Association of Official Analytical Chemists, Inc., *Official Methods of Analysis of the Association of Official Analytical Chemists*). This text is updated periodically, and any update or change in the method of analysis would be incorporated, as warranted, in the latest edition. The Brix may be determined by any other method that gives equivalent results.

(c) *Brix/acid ratio* means the ratio of the degrees Brix of the juice to the grams of anhydrous citric acid per 100 milliliters of the juice.

(d) *Color.*

(1) Pineapple juice.

(i) *Very good* color means the juice possesses a bright typical varietal color ranging from light yellowish beige to a golden amber or golden pinkish cast typical of freshly pressed and properly processed juice from mature, well-ripened pineapple.

(ii) *Good* color means the juice possesses a typical varietal color which may be slightly dull (but not off-color) yet normal for freshly pressed and properly processed juice from mature, well-ripened pineapple.

(2) Pineapple juice from concentrate.

(i) *Very good* color means the juice possesses a typical varietal color ranging from light yellowish beige to a golden amber or golden pinkish cast typical of reconstituted and properly processed juice from mature, well-ripened pineapple.

(ii) *Good* color means the juice possesses a typical varietal color which may be slightly dull (but not off-color) yet normal for reconstituted and properly processed juice from mature, well-ripened pineapple.

(e) *Defects* mean excess pulp, dark specks, pieces of shell, seeds, or other coarse or hard substances that are objectionable particles.

(1) *Practically free* from defects means the defects that are present do not more than slightly affect the appearance or palatability of the juice.

(2) *Reasonably free* from defects means the defects that are present do not more than materially affect the appearance or palatability of the juice.

(f) *Finely divided insoluble solids* means the particles in the juice that separate from suspension by centrifuging.

(g) *Flavor.* (1) *Very good* flavor means the juice possesses a distinct varietal flavor that is typical of freshly extracted juice (pineapple juice) or typical of reconstituted juice (pineapple juice from concentrate) that is properly processed from mature, well-ripened pineapple.

(2) *Good* flavor means the juice possesses a normal varietal flavor that may be slightly caramelized but is not off-flavor.

(h) *Sample unit* means a container and/or its entire contents, a portion of the contents of one or more containers or other unit of commodity.

§ 52.1764 Recommended sample unit sizes.

The factors of quality and analysis may be determined based on the following sample unit sizes:

(a) The entire contents of a container;

(b) A representative portion of the contents of a container;

(c) A combination of the contents of two or more containers; or

(d) A representative portion of processed product stored or held in bulk containers.

§ 52.1765 Grades.

(a) *U.S. Grade A* is the quality of pineapple juice or pineapple juice from concentrate that meets the applicable requirements of Table I or Table II.

(b) *U.S. Grade B* is the quality of pineapple juice or pineapple juice from concentrate that meets the applicable requirements of Table I or Table II.

(c) *Substandard* is the quality of pineapple juice or pineapple juice from concentrate that fails to meet the requirements for U.S. Grade B.

§ 52.1766 Factors of quality and analysis.

The grade of a lot of pineapple juice or pineapple juice from concentrate is based on observation and analysis of the juice for the following quality and analytical factors:

(a) *Quality:*

(1) Color;

(2) Defects;

(3) Flavor; and

(4) Total score.

(b) *Analytical:*

(1) Acid measurement;

(2) Brix measurement;

(3) Brix/acid ratio; and

(4) Finely divided insoluble solids.

(c) The relative importance of each quality factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Defects	40
Flavor	40
Total Score	100

(d) The essential variations within each factor are so described that the value may be determined for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, 17 to 20 points means 17, 18, 19, or 20 points) and the score points shall be prorated relative to the degree of excellence for each factor.

§ 52.1767 Fill of container.

The standard of fill of container for pineapple juice or pineapple juice from concentrate is a fill of not less than 90 percent of the total capacity of the container except when the food is frozen. Pineapple juice or pineapple juice from concentrate that does not meet this requirement is "Below Standard in Fill."

§ 52.1768 Requirements for grades.

TABLE I.—PINEAPPLE JUICE

Factors	Grade A	Grade B
Quality:		
Color	Very good	Good.
Score points	17 to 20	14 to 16.
Defects	Practically free	Reasonably free.
Score points	34 to 40	28 to 33.
Flavor	Very good	Good.
Score points	34 to 40	28 to 33.
Total score (minimum)	85 points	70 points.

Factors	Grade A		Grade B	
	Unsweetened	Sweetened	Unsweetened	Sweetened
Analytical:				
Acid (maximum)	1.10g/100ml	1.10g/100ml	1.35g/100ml	1.35g/100ml
Brix (minimum)	12.0°	12.5°	10.5°	11.0°.
Soluble pineapple juice solids (percent by weight of finished product prior to addition of sweetener): (minimum).		12.0		10.5.
Brix/acid ratio: (minimum)	12.0:1	12.0:1	12.0:1	12.0:1.
Finely divided insoluble solids (percent by volume): Range.	5 to 26%	5 to 26%	5 to 30%	5 to 30%.

TABLE II.—PINEAPPLE JUICE FROM CONCENTRATE

Factors	Grade A	Grade B
Quality:		
Color	Very good	Good.
Score points	17 to 20	14 to 16.
Defects	Practically free	Reasonably free.
Score points	34 to 40	28 to 33.
Flavor	Very good	Good.
Score points	34 to 40	28 to 33.
Total score (minimum)	85 points	70 points

Factors	Grade A		Grade B	
	Unsweetened	Sweetened	Unsweetened	Sweetened
Analytical:				
Acid (maximum)	1.10g/100ml	1.10g/100ml	1.35g/100ml	1.35g/100ml
Brix (minimum)	12.8°	13.0°	12.8°	13.0°
Soluble pineapple juice solids (percent by weight of finished product prior to addition of sweetener): (minimum).		12.8		12.8
Brix/acid ratio: (minimum)	12.0:1	12.0:1	12.0:1	12.0:1
Finely divided insoluble solids (percent by volume): Range.	5 to 26%	5 to 26%	5 to 30%	5 to 30%

§ 52.1769 Sample size.

The sample size used to determine whether pineapple juice meets the requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

§ 52.1770 Lot requirements.

A lot of pineapple juice or pineapple juice from concentrate is considered as meeting the requirements for quality if:

(a) The requirements specified in Table I or II, as applicable, are met; and

(b) The sampling plans and procedures in 7 CFR 52.1 through 52.83 are met.

Subpart—United States Standards for Grades of Canned Plums [1]

SOURCE: 37 FR 23807, Nov. 9, 1972, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, VARIETIES, STYLES, AND GRADES

§ 52.1781 Product description.

"Canned plums" is the product represented as defined in the Standards of Identity (21 CFR 145.185(a)) for canned plums issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[41 FR 54161, Dec. 13, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1782 Varietal types.

(a) Purple plum groups.

(b) Green-yellow plum groups.

§ 52.1783 Styles.

(a) "Whole, unpeeled, unpitted."

(b) "Whole, peeled, unpitted."

(c) "Whole, unpeeled pitted."

(d) "Whole, peeled, pitted."

(e) "Halves, unpeeled, pitted."

(f) "Halves, peeled, pitted."

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.

§ 52.1784 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned plums that:

(1) Have similar varietal characteristics;

(2) Have a normal flavor and odor;

(3) Have a good, practically uniform color;

(4) Are at least reasonably uniform in size;

(5) Are practically free from defects;

(6) Have a good character; and

(7) Score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned plums that:

(1) Have similar varietal characteristics;

(2) Have a normal flavor and odor;

(3) Have a reasonably good and reasonably uniform color;

(4) Are at least fairly uniform in size;

(5) Are reasonably free from defects;

(6) Have a reasonably good character; and

(7) Score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned plums that:

(1) Have similar varietal characteristics;

(2) Have a normal flavor and odor;

(3) Have a fairly good color;

(4) Are fairly uniform in size;

(5) Are fairly free from defects;

(6) Have a fairly good character; and

(7) Score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of canned plums that fail to meet the requirements of U.S. Grade C.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.1785 Liquid media and Brix measurements for canned plums.

"Cut-out" requirements for liquid media in canned plums are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurements for the particular varieties and respective designations are specified in Table I:

TABLE I—BRIX MEASUREMENTS

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s)".	25° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)".	19° or more but less than 25°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)".	15° or more but less than 19°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)".	11° or more but less than 15°.
"In water"	Not applicable.
"In fruit juice(s) and water"	Do.
"In fruit juice(s)"	Do.

[37 FR 23807, Nov. 9, 1972, as amended at 41 FR 54161, Dec. 13, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1786 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled with plums as full as practicable without impairment of quality, and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.1787 Minimum drained weight requirements.

(a) *General.* (1) The minimum drained weights specified in Table II are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of the grades.

(2) The minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for determining drained weight.* (1) The drained weight of canned plums is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve (or equivalent) of proper diameter containing 8 meshes to the inch (2.3 mm (0.0937-inch), ±3 percent, square openings) so as to distribute the product evenly, turning the pit cavities down in halves, incline the sieve to a 17 to 20 degree angle to facilitate drainage and allow to drain for two (2) minutes.

(2) The drained weight is the weight of the sieve and plums less the weight of the dry sieve. A sieve 20.32 centimeters (8 inches) in diameter (or approximate equivalent) is used for containers having water capacities of 1.5 kilograms (3.3 pounds) or less, and a sieve 30.48 centimeters (12 inches) in diameter (or approximate equivalent) is used for containers having water capacities greater than 1.5 kilograms (3.3 pounds). The temperature of the packing medium at time of drained weight determination shall be 20° Celsius ±10 degrees (68° Farhenheit ±18°).

(3) Water capacity of a container means the maximum weight of distilled water at 20° Celsius (68° Fahrenheit) that the sealed container will hold.

(c) *Compliance with drained weight requirements.* A lot of canned plums is considered as meeting the minimum drained weights if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample is equal to or greater than the acceptance value for drained weights (designated as "X_d" in Table II); and

(2) The number of sample units which fail to meet the acceptance value for drained weight lower limit for individual containers (designated as "LL" in Table II) does not exceed the applicable acceptance number specified in the sampling plan contained in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products (§§ 52.1-52.83).

TABLE II—ACCEPTANCE VALUE FOR DRAINED WEIGHTS (OUNCES)

Container size (metal, unless otherwise stated)	Water capacity	In any liquid medium			
		Whole		Halves	
		X_d	LL	X_d	LL
8Z tall	8.65	4.3	3.7	4.8	4.2
8Z glass	8.2	4.1	3.5	4.5	3.9
No. 1 tall	16.6	8.3	7.5	9.1	8.3
No. 303	16.85	8.4	7.6	9.3	8.5
No. 303 glass	17.0	8.5	7.7	9.4	0.6
No. 2	20.5	10.3	9.4	11.3	18.4
No. 2½	29.75	14.9	13.7	16.4	15.2
No. 2½ glass	29.5	14.8	13.6	16.2	15.0
No. 10	109.45	54.7	52.5	60.2	58.0

[41 FR 54161, Dec. 12, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1788 Recommended fill weights.

(a) *General.* The minimum fill weight recommendations specified in Table III are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weight.* Fill weight is determined in accordance with the U.S. Department of Agriculture's "Variables Control Chart Plan" and adaptations thereto, as applicable to processed fruits and vegetables and related products.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

$\bar{X}_{min}$ means the minimum lot average fill weight.

LWL$_{\bar{x}}$ means the lower warning limit for subgroup averages.

LRL$_{\bar{x}}$ means the lower reject limit for subgroup averages.

LWL$_I$ means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R' means a specified average range value.

R$_{max}$ means a specified maximum range for a subgroup.

Sampling allowance code means a code letter on the Sampling Allowance Chart of the Variables Control Chart Plan. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Subgroup size.* The subgroup size for the determination of fill weights shall be 5 containers.

(e) *Sampling frequency.* (1) Small lots—for lots consisting of 100 cases or less which require 4 hours or more to pack use the "optional fill weight procedure" contained in the Instructions for Adaptation of the Variables Control Chart Plan to Fill Weights.

(2) Other than small lots—draw at least one subgroup per code approximately every 40 minutes.

(f) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Department of Agriculture's "Variables Control Chart Plan" and adaptations thereto, as applicable to processed fruits and vegetables and related products.

TABLE III—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal unless otherwise stated)	$\bar{X}'_{min}$	LWL$_{\bar{x}}$	LRL$_{\bar{x}}$	LWL	LRL	R'	R$_{max}$	Sampling allowance code
Purple plums, whole, unpeeled								
8 Z tall (211 x 304) and 8 Z glass	4.6	4.1	3.8	3.5	2.9	1.3	2.70	J.
No. 303 (303 x 406) and No. 303 glass	9.8	9.2	8.8	8.4	7.7	1.6	3.4	M.
No. 2 (307 x 409) less than 17	11.5	10.8	10.4	9.9	9.1	1.9	3.9	O.
17 or more	12.0	11.3	10.9	10.4	9.6	1.9	3.9	O.
No. 2½ (401 x 411):								
Less than 17	17.0	16.1	15.6	15.0	14.0	2.3	4.9	S.
17 to 22	17.5	16.6	16.1	15.5	14.5	2.3	4.9	S.
23 or more	18.0	17.1	16.6	16.0	15.0	2.3	4.9	S.
No. 2½ Glass:								
Less than 17	16.5	15.6	15.1	14.5	13.5	2.3	4.9	S.
17 or more	17.0	16.1	15.6	15.0	14.0	2.3	4.9	S.
No. 10 (603 x 700):								
Less than 70	66.0	64.5	63.7	62.6	60.9	4.0	8.4	Z.
70 or more	68.0	67.5	66.7	65.6	63.9	4.0	8.4	Z.
Purple plums, halved, peeled and unpeeled								
8 Z tall and 8 Z glass	5.2	4.7	4.5	4.2	3.7	1.2	2.5	I.
No. 303 and No. 303 glass	10.7	10.2	9.9	9.5	8.9	1.4	3.0	K.
No. 2	13.3	12.7	12.3	11.9	11.2	1.6	3.4	M.
No. 2½	18.7	17.9	17.5	16.9	16.0	2.1	4.4	Q.
No. 2½ glass	18.5	17.7	17.3	16.7	15.8	2.1	4.4	Q.
No. 10	70.0	68.7	68.0	67.0	65.5	3.5	7.4	X.
Green-yellow plums, whole, unpeeled								
8 Z tall (211 x 304) and 8 Z glass	5.1	4.6	4.3	4.0	3.4	1.3	2.7	J.
No. 303 (303 x 406) and No. 303 glass	10.0	9.4	9.0	8.6	7.9	1.6	3.4	M.
No. 2 (307 x 409)	12.2	11.5	11.1	10.6	9.8	1.9	3.9	O.
No. 2½ (401 x 411)	18.2	17.3	16.8	16.2	15.2	2.3	4.9	S.
No. 2½ glass	17.9	17.0	16.5	15.9	14.9	2.3	4.9	S.
No. 10 (603 x 700)	67.0	65.5	64.7	63.6	61.9	4.0	8.4	Z.
Green-yellow plums, whole, peeled								
8 Z tall and 8 Z glass	5.3	4.8	4.5	4.2	3.6	1.3	2.7	J.
No. 303 and No. 303 glass	10.5	9.9	9.5	9.1	8.4	1.6	3.4	M.
No. 2	12.8	12.1	11.7	11.2	10.4	1.9	3.9	O.

TABLE III—RECOMMENDED FILL WEIGHT VALUES—Continued

Container designation (metal unless otherwise stated)	$\bar{X}'_{min}$	LWL_a	LRL_a	LWL	LRL	R'	R_{max}	Sampling allowance code
No. 2½	18.7	17.8	17.3	16.7	15.7	2.3	4.9	S.
No. 2½ glass	18.4	17.5	17.0	16.4	15.4	2.3	4.9	S.
No. 10	68.8	67.3	66.5	65.4	63.7	4.0	8.4	Z.

[37 FR 23807, Nov. 9, 1972; 37 FR 24813, Nov. 22, 1972; 37 FR 25029, Nov. 25, 1972. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SAMPLE UNIT SIZE

§ 52.1789 Sample unit size.

Compliance with requirements for the various quality factors is based on the following sample unit size for the applicable style:

(a) Whole—25 whole plums.

(b) Halves—50 halves.

FACTORS OF QUALITY

§ 52.1790 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size	20
Defects	30
Character	30
Total score	100

(b) *Definition of flavor and odor.* "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.1791 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.1792 Color.

(a) *General.* The factor of color refers to the color of the skin and any exposed flesh typical for the varietal group and to the intensity and brightness of such characteristic color. Characteristic mottling on the skin for the varietal group is considered as typical color and not as lacking in uniformity of color.

(b) *Definitions of color*—(1) *Well colored.* The color is bright and well developed, typical of well matured plums. Any exposed flesh is at least reasonably bright and with respect to purple plums the packing media is a practically clear and highly colored purple liquid.

(2) *Reasonably well colored.* The color is reasonably bright and reasonably well developed, typical of reasonably well-matured plums. Any exposed flesh is at least fairly bright and with respect to purple plums and packing media is a reasonably clear and reasonably high-colored purple liquid.

(3) *Fairly well colored.* The color is fairly bright and fairly well developed, typical of fairly well-matured plums. Any exposed flesh may be lightly dull.

(4) *Poorly colored.* The color may be dull, poorly developed, typical of immature plums, including the "dead brown" color of canned purple plums. Any exposed flesh may be excessively dull; or the plums may be off-color due to improper processing.

(c) (*A*) *classification.* Canned plums that possess a good color may be given a score of 18 to 20 points. "Good color" means that the plums are well colored and as a mass possess a practically uniform color, typical of a single varietal group; and the number of reasonably well colored plums does not exceed the number specified for the style in § 52.1796.

(d) (*B*) *classification*. Canned plums that possess a reasonably good color may be given a score of 16 or 17 points. Canned plums that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score (this is a limiting rule). "Reasonably good color" means that the plums are reasonably well colored and as a mass possess a reasonably uniform color, typical of a single varietal group; and the number of fairly well colored units does not exceed the number specified for the style in § 52.1796.

(e) (*C*) *classification*. Canned plums that possess a fairly good color may be given a score of 14 or 15 points. Canned plums that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the plums may be at least fairly well colored; possess a color typical of a single varietal group which have been properly processed; that such characteristic color may be markedly variable; and the number of poorly colored plums does not exceed the number specified for the style in § 52.1796.

(f) (*SStd*) *classification*. Canned plums that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1793 Uniformity of size.

(a) *General*. Compliance with uniformity of size is ascertained by determining the percent by which the weight of the largest full-sized unit exceeds the weight of the smallest full-sized unit in the sample unit. Plums of halved style that are not cleanly divided into halves shall be separated into two approximately equal halves before ascertaining uniformity of size.

(b) (*A*) *classification*. Canned plums that are practically uniform in size may be given a score of 18 to 20 points. "Practically uniform in size" means that the number of units that are in excess of the maximum weight variation does not exceed the number specified for the style for U.S. Grade A in § 52.1796.

(c) (*B*) *classification*. Canned plums that are reasonably uniform in size may be given a score of 16 or 17 points. "Reasonable uniform in size" means that the number of units that are in excess of the maximum weight variation does not exceed the number specified for the style for U.S. Grade B in § 52.1796.

(d) (*C*) *classification*. Canned plums that are fairly uniform in size may be given a score of 14 or 15 points. Canned plums that fall into this classification shall not be classified above U.S. Grade B, regardless of the total score (this is a partial limiting rule). "Fairly uniform in size" means that the number of units that are in excess of the maximum weight variation does not exceed the number specified for the style for U.S. Grade C in § 52.1796.

(e) (*SStd*) *classification*. Canned plums that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score (this is a limiting rule).

§ 52.1794 Defects.

(a) *General*. The factor of defects refers to the degree of freedom from stems, leaves, crushed or broken units, pits or loose pits for the applicable style—blemished and seriously blemished units and from any other defects not specifically mentioned which detract from the appearance or edibility of the product.

(b) *Definitions*. (1) A "unit," in whole style, means a whole or substantially whole plum. In halved style, any whole or partially whole plum is separated into two approximately equal halves and each half therefrom is considered a "unit."

(2) "Small stem" means the small stem or portion thereof that attaches the plum to the branch of the tree.

(3) "Harmless extraneous material" means leaves or portions thereof or other harmless plant material.

(4) "Crushed or broken" means that a unit bears marks of crushing or is otherwise crushed or broken not due to ripeness. In whole style, plums that possess broken skins or that are split to the pit cavity are not considered crushed or broken unless the entire pit cavity is exposed or the unit is mutilated to the extent that it is not intact as a whole or substantially whole plum. In halved style, halves of plums that are slightly split are not considered crushed or broken unless the unit is seriously mutilated.

(5) A "pit" means a whole pit or any portion thereof. In whole style, only "loose pits" are considered as defects. In halved style, pits are considered as defects whether loose or attached to a unit.

(6) "Blemished" means any injury which, singly or in the aggregate on a unit or in a unit (except for internal gummosis), materially affects the appearance of the unit and includes, but is not limited to:

(i) Surface areas blemished by sunburn, scab, or other discoloration (exclusive of characteristic mottling having an aggregate area exceeding that of a circle three-sixteenths of an inch in diameter not extending into the fruit tissue and materially affects the appearance or eating quality of the unit.

(ii) Surface areas blemished by sunburn, scab, or other serious discoloration (exclusive of characteristic mottling) having an aggregate area equivalent of, or less than, that of a circle three-sixteenths of an inch in diameter and extending into the fruit tissue so that the flesh is materially discolored or toughened:

(iii) Abnormalities, such as "doubles" and growth cracks, but not "shriveled" areas:

(iv) External gummosis.

(7) "Seriously blemished" means any damage that seriously affects the appearance or edibility of the unit, regardless of area.

(c) (*A*) *classification*. Canned plums that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the number of defects that may be present does not exceed the number specified for the style and respective type of defect in § 52.1796.

(d) (*B*) *classification*. Canned plums that are reasonably free from defects may be given a score of 24 to 26 points. Canned plums that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the number of defects that may be present does not exceed the number specified for the style and respective type of defect in § 52.1796.

(e) (*C*) *classification*. Canned plums that are fairly free from defects may be given a score of 21 to 23 points. Canned plums that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the number of defects that may be present does not exceed the number specified for the style and respective type of defect in § 52.1796.

(f) (*SStd*) *classification*. Canned plums that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[37 FR 23807, Nov. 9, 1972, as amended at 41 FR 54162, Dec. 13, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1795 Character.

(a) *General*. The factor of character refers to the texture and condition of the flesh, to the tenderness and firmness of the plums, and to shriveled areas of the skin.

(b) *Definitions*—(1) *Good character*. The units are thick-fleshed, tender, may be soft but hold their apparent original conformation, and otherwise possess a good texture of both skin and flesh characteristic of canned plums that have been properly processed from well-ripened or well-matured plums.

(2) *Reasonably good character*. The units may be reasonably fleshy, may

be variable in texture from soft to slightly firm, and otherwise possess a reasonably good texture of both skin and flesh characteristic of canned plums that have been properly processed from reasonably well-ripened or reasonably well-matured plums.

(3) *Fairly good character.* The units may be thin fleshed, possess a fairly good texture of both skin and flesh, may be variable in texture from very soft to slightly tough but are not so soft as to show material disintegration, and may possess shriveled areas that materially affect, but do not seriously affect, the appearance of the product.

(4) *Poor character.* The units may be very thin fleshed, possess a poor texture of both skin and flesh, may be variable in texture from mushy to more than slightly tough, and may possess shriveled areas that seriously affect the appearance of the product.

(c) (*A*) *classification.* Canned plums that possess a good character may be given a score of 27 to 30 points. To score in this classification the number of units that are of reasonably good character shall not exceed the number specified for the style in § 52.1796.

(d) (*B*) *classification.* Canned plums that possess a reasonable good character may be given a score of 24 to 26 points. Canned plums that fall into this classification shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a limiting rule). To score in this classification the number of units that are of fairly good character shall not exceed the number specified for the style in § 52.1796.

(e) (*C*) *classification.* Canned plums that possess a fairly good character may be given a score of 21 to 23 points. Canned plums that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). To score in this classification the number of units that are of poor character shall not exceed the number specified for the style in § 52.1796.

(f) (*SStd*) *classification.* Canned plums that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

ALLOWANCES FOR QUALITY FACTORS

§ 52.1796 Allowances for quality factors.

TABLE IV—STYLE, WHOLE; SAMPLE UNIT SIZE, 25 PLUMS

Factors	Maximum number of units permissible for respective grade		
	A	B	C
Color:			
Reasonably good	2	(¹)	(¹)
Fairly good	0	4	(¹)
Poor	0	0	4
Uniformity of size:			
Variation in weight			
Exceeds 50 pct	1	(¹)	(¹)
Exceeds 75 pct	0	1	(¹)
Exceeds 100 pct	0	0	1

Factors	Maximum number of units permissible for respective grade					
	A		B		C	
	Ind. ²	Avg. ³	Ind.	Avg.	Ind.	Avg.
Absence of defects:						
Harmless extraneous material	0	0	1	0.2	1	0.4

Factors	Maximum number of units permissible for respective grade					
	A		B		C	
	Ind.[2]	Avg.[3]	Ind.	Avg.	Ind.	Avg.
Small stem	1	0.6	1	[4]NA	2	NA
Loose pits	1	NA	2	NA	3	NA
Crushed or broken	0	0	1	NA	6	NA
Blemished and seriously blemished	2	NA	4	NA	7	NA
Including:						
Seriously blemished	1	NA	1	NA	3	NA
Blemished, seriously blemished, and crushed or broken					8	NA
Character:						
Reasonably good	2		(1)		(1)	
Fairly good	0		5		(1)	
Poor	0		0		5	

[1] No limit.
[2] Ind—Means individual sample unit.
[3] Avg—Means average of all the sample units in the sample.
[4] NA—Means not applicable.

TABLE V—STYLE, HALVES; SAMPLE UNIT SIZE, 50 HALVES

Factors	Maximum number of units permissible for respective grade		
	A	B	C
Color:			
Reasonably good color	5	(1)	(1)
Fairly good	0	7	(1)
Poor color	0	0	4
Uniformity of size:			
Variation in weight			(1)
Exceeds 50 pct	3	(1)	(1)
Exceeds 75 pct	0	3	(1)
Exceeds 100 pct	0	0	3

Factors	Maximum number of units permissible for respective grade					
	A		B		C	
	Ind.[2]	Avg.[3]	Ind.	Avg.	Ind.	Avg.
Absence of defects:						
Harmless extraneous material	0	0	1	0.2	1	0.4
Small stem	1	0.6	1	[4]NA	2	NA
Pits	1	0.5	1	NA	3	NA
Crushed or broken	0	0	2	NA	12	NA
Blemished and seriously blemished	5	0	7	NA	15	NA
Including:						
Seriously blemished	1	NA	2	NA	7	NA
Blemished, seriously blemished, and crushed or broken					17	NA
Character:						
Reasonably good	5		(1)		(1)	
Fairly good	0		10		(1)	
Poor	0		0		10	

[1] No limit.
[2] Ind—Means individual sample unit.
[3] Avg—Means average of all the sample units in the sample.
[4] NA—Means not applicable.

[41 FR 54162, Dec. 13, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT COMPLIANCE

§ 52.1797 Ascertaining the grade of a lot.

The grade of a lot of canned plums covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.1798 Score sheet for canned plums.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Count ....
Drained weight (ounces) ....
Brix measurement ....
Sirup designation (extra heavy, heavy, etc.) ....
Varietal type ....
Style (whole) (halves) ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	[1]316–17
		(C)	[1]14–15
		(SStd)	[1]0–13
Uniformity of size	20	(A)	18–20
		(B)	16–17
		(C)	[2]14–16
		(SStd)	[1]0–20
Defects	30	(A)	27–30
		(B)	[1]24–26
		(C)	[1]21–23
		(SStd)	[1]0–20
Character	30	(A)	27–30
		(B)	[1]24–26
		(C)	[1]21–23
		(SStd)	[1]0–20
Total score	100		

Normal flavor and odor ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

[37 FR 23807, Nov. 9, 1972; 37 FR 25029, Nov. 25, 1972. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Canned White Potatoes

SOURCE: 52 FR 27664, July 23, 1987, unless otherwise noted.

§ 52.1811 Product description.

Canned white potatoes is the product as defined in the Standards of Identity for Certain Other Canned Vegetables (21 CFR 155.200) issued under the Federal Food, Drug, and Cosmetic Act.

§ 52.1812 Styles.

(a) *Whole* consists of peeled white potatoes that retain the approximate original conformation of the whole potato.

(b) *Slices or sliced* consist of peeled whole white potatoes cut into slices of substantially uniform thickness.

(c) *Dice or diced* consist of peeled whole white potatoes cut into slices of substantially uniform thickness.

(d) *Shoestring, french style, or julienne* consists of peeled whole white potatoes cut into rectangular units having length measurements which are three (3) or more times the width measurements.

(e) *Pieces* consist of peeled whole white potatoes of random size and/or shape, or potatoes that have been cut into approximate quarters or wedge-shaped units.

(f) Any combination of two (2) or more of the foregoing styles constitutes a style and shall be considered as a mixture of the individual styles that comprise the combination.

§ 52.1813 Definitions of terms.

As used in these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Blemished* means units affected by brown or black internal or external discoloration, discolored or unpeeled eyes, hollow heart, scab, or units blemished by other means to such an extent that the appearance or eating quality of the unit is materially affected.

(b) *Seriously blemished* means units affected by brown or black internal or external discoloration, pathological or insect injury or units blemished by other means to such an extent that the appearance or eating quality of the unit is seriously affected.

(c) *Color*—(1) *Good color* means that the units, exclusive of blemished areas, are practically free from oxidation or light greenish coloration, and have a bright, practically uniform, light color, typical of canned white potatoes processed from potatoes of similar varietal characteristics.

(2) *Reasonably good color* means that the units possess a reasonably good color, and the units individually or collectively may be variable in color, dull, slightly oxidized, or otherwise discolored but not to the extent that the appearance of the product is seriously affected.

(3) *Poor color* means the units fail to meet the requirements for reasonably good color.

(d) *Defects*—(1) *Practically free from defects* means the defects present do not materially affect the appearance or edibility of the product.

(2) *Reasonably free from defects* means the defects present do not seriously affect the appearance or edibility of the product.

(e) *Diameter:* (1) Of elongated whole potatoes means the greatest measurement at right angles to the longitudinal axis of the units.

(2) Of round or nearly round whole potatoes means the greatest measurement across the center of the unit.

(3) Of sliced style potatoes means the shortest measurement of the larger cut surface of the slice.

(f) *Extraneous vegetable material (EVM)* means harmless plant material such as leaves, stems, or roots.

(g) *Flavor and Odor*—(1) *Good flavor and odor* means a good, distinctive flavor and odor which is characteristic of properly prepared and properly processed canned white potatoes, (including any permitted safe and suitable optional ingredient(s)), that are free from objectionable flavors or odors.

(2) *Reasonably good flavor and odor* means that the canned white potatoes, (including any permitted safe and suitable optional ingredient(s)), may be lacking in good flavor and odor but are free from objectionable flavors or odors.

(h) *Mechanical damage* means damage incurred during harvesting or processing such as broken, crushed or cracked units, and units that are excessively trimmed.

(i) *Pathological or insect injury* means damage caused by disease or insects.

(j) *Peel* means the outer layer of the potato that is normally removed during processing.

(k) *Potato unit* means one whole, slice, dice, shoestring, or piece of potato as applicable for the style.

(l) *Sample unit size* means the amount of product to be used for grading. It may be:

(1) The entire contents of a container;

(2) A portion of the contents of a container;

(3) A combination of the contents of two (2) or more containers;

(4) A portion of unpacked product.

(m) *Texture.* The factor of texture refers to the tenderness of the canned white potatoes and to the degree of freedom from sloughing and from hard or objectionably coarse grained units.

(1) *Good texture* means the texture of the potatoes is practically uniform and is typical of properly prepared and properly processed potatoes and that the potatoes are firm and tender and have a fine and even grain. There may be sloughing to a degree that does not more than slightly affect the appearance of the product.

(2) *Reasonably good texture* means the potatoes are reasonably tender, and may be variable in texture, ranging from somewhat soft to firm, but are not tough, hard or mushy. There may be a moderate amount of sloughing that does not seriously affect the appearance of the product.

(3) *Poor texture* means the potato units fail to meet the requirements for reasonably good texture.

§ 52.1814 Recommended fill of container.

(a) The fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. Each container shall be filled with white potatoes as full as practicable without impairment of quality and the product and packing medium shall occupy not less than 90 percent of the total capacity of the container.

(b) Total capacity of the container means the maximum weight of distilled water, at 68 degrees Fahrenheit (20 degrees Celsius), which the sealed container will hold.

§ 52.1815 Recommended minimum drained weights.

(a) *General.* (1) The minimum drained weight values are given in Table I. They are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The minimum drained weights are based on the weight of the white potatoes after the canned product has been allowed to equalize for 15 or more days after the product has been canned.

(b) *Method of determining drained weight.* (1) The drained weight of canned white potatoes is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve (or equivalent) of the proper diameter containing 8 meshes to the inch (0.0937-inch (2.4 mm), ±3 percent, square openings) so as to distribute the product evenly. Without shifting the product, incline the sieve to a 17 to 20 degree angle to facilitate drainage and allow to drain for two (2) minutes.

(2) The drained weight is the weight of the sieve and white potatoes less the weight of the dry sieve. The diameter of the sieve shall be 8 inches (20.3 cm), or equivalent, if the water capacity of the container is less than 3 pounds (1.36 kg), or 12 inches (30.5 cm), or equivalent, if such capacity is 3 pounds (1.36 kg) or more.

(c) *Compliance with minimum drained weight values.* Compliance with the minimum drained weight values in Table I is determined by averaging the drained weights from all the containers in the sample which represent a specific lot. Such lot is considered as meeting the minimum drained weight values if the following criteria are met:

(1) The sample average (average of all the containers in the sample) meets the minimum average drained weight value (designated as "X_d" in Table I); and

(2) The number of sample units which fail to meet the minimum drained weight value for individual containers (designated as "LL" in Table I and IA) does not exceed the applicable acceptance number specified in the applicable single sampling plans of the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

TABLE I.—MINIMUM DRAINED WEIGHTS FOR CANNED WHITE POTATOES ENGLISH (AVOIRDUPOIS) SYSTEM

Container Designation	Container Dimensions		Styles									
	Diameter (inches)	Height (inches)	Whole		Sliced		Diced		Julienne		Pieces	
			$\bar{X}d$[1] (oz.)	LL[2] (oz.)	$\bar{X}d$ (oz.)	LL (oz.)	$\bar{X}d$ (oz.)	LL (oz.)	$\bar{X}d$ (oz.)	LL (oz.)	$\bar{X}d$ (oz.)	LL (oz.)
8Z Tall	2 11/16	3 4/16	5.5	4.8	5.5	5.0	5.6	5.1	5.3	4.8	5.5	4.8
No. 300	3	4 7/16	9.5	8.7	9.7	9.0	10.0	9.5	8.8	8.3	9.5	8.7
No. 303	3 3/16	4 6/16	10.2	9.3	10.2	9.4	10.5	9.8	9.3	8.6	10.2	9.3
No. 2	3 7/16	4 9/16	13.0	11.9	13.3	12.4	13.5	12.7	12.3	11.5	13.0	11.9
No. 2½	4 1/16	4 11/16	19.0	17.7	19.5	18.4	20.0	19.0	18.3	17.3	19.0	17.7
No. 10	6 3/16	7	74.0	71.5	75.0	73.0	76.0	74.2	72.0	70.2	74.0	71.5

[1] "$\bar{X}_d$" means the minimum average drained weight from all the containers in the sample.

[2] "LL" means the minimum drained weight for individual containers.

TABLE IA.—MINIMUM DRAINED WEIGHTS FOR CANNED WHITE POTATOES METRIC SYSTEM (SYSTEME INTERNATIONAL)

Container Designation	Container Dimensions		Styles									
	Diameter (millimeters)	Height (millimeters)	Whole		Sliced		Diced		Julienne		Pieces	
			$\bar{X}_d$[1] (grams)	LL[2] (grams)	$\bar{X}_d$ (grams)	LL (grams)	$\bar{X}_d$ (grams)	LL (grams)	$\bar{X}_d$ (grams)	LL (grams)	$\bar{X}_d$ (grams)	LL (grams)
8Z Tall	68.3	82.6	155.9	136.1	155.9	141.7	158.8	144.6	150.3	136.1	155.9	136.1
No. 300	76.2	112.7	269.3	246.6	275.0	255.1	283.5	269.3	249.5	235.2	269.3	246.6
No. 303	81.0	111.1	289.2	263.7	289.2	266.5	297.7	277.8	263.7	243.8	289.2	263.7
No. 2	87.3	115.9	368.5	337.4	377.0	351.5	382.7	360.0	348.7	326.0	368.5	337.4
No. 2½	103.2	119.1	538.6	501.8	552.8	521.6	567.0	538.6	518.8	490.4	538.6	501.8
No. 10	157.2	177.8	2097.9	2027.0	2126.2	2069.5	2154.6	2103.5	2041.2	1990.1	2097.9	2027.0

[1] "$\bar{X}_d$" means the minimum average drained weight from all the containers in the sample.

[2] "LL" means the minimum drained weight for individual containers.

§ 52.1816 Recommended sample unit sizes.

The requirements for size determination and for quality factors other than the defect defined as extraneous vegetable material are based on a recommended sample unit size of 567g (20.0 oz) of drained product, or the entire drained contents of a container. The recommended sample unit size for extraneous vegetable material is the entire contents of the container.

§ 52.1817 Size requirements for whole potatoes.

(a) A lot of canned whole potatoes shall be assigned a single size designation if the applicable requirements of Table II are met.

(b) A lot of canned whole potatoes that fails the requirements of Table II for a single size designation shall be declared in terms of individual sample unit size designations.

TABLE II.—SIZE DESIGNATION OF WHOLE POTATOES

Word designation	Number designation	In a 567g (20.0 oz) sample unit	One or more sample unit(s) may fall in
Tiny	Size 1	At least 453.6g (16.0 oz)—80% are not more than 25mm (0.98 in) in diameter 113.4g (4 oz)—20% may have a diameter of more than 25mm (0.98 in) but not more than 38mm (1.49 in).	The next larger designation—small (size 2), provided these sample units do not exceed the acceptance number.[1]
Small	Size 2	At least 453.6g (16.0 oz)—80% have a diameter of more than 25mm (0.98 in) but not more than 38mm (1.49 in). 56.7g (2.0 oz)—10% may have a diameter of 25mm (0.98 in) or less 56.7g (2.0 oz)—10% may have a diameter of more than 38mm (1.49 in) but not more than 51mm (2.0 in).	The next smaller designation—tiny (size 1), the next larger designation—medium (size 3) or a combination thereof, provided these sample units do not exceed the acceptance number.[1]
Medium	Size 3	At least 453.6g (16.0 oz)—80% have a diameter of more than 38mm (1.49 in) but not more than 51mm (2.0 in). 56.7g (2.0 oz)—10% may have a diameter of more than 25mm (0.98 in) but not more than 38mm (1.49 in). 56.7g (2.0 oz)—10% may have a diameter of more than 51mm (2.0 in)	The next smaller designation—small (size 2), the next larger designation—large (size 4) or a combination thereof, provided these sample units do not exceed the acceptance number.[1]
Large	Size 4	At least 510.3g (18.0 oz)—90% have a diameter of more than 51mm (2.0 in) 56.7g (2.0 oz)—10% may have a diameter of more than 38mm (1.49 in) but not more than 51mm (2.0 in).	The next smaller designation—medium (size 3), provided these sample units do not exceed the acceptance number.[1]

[1] Number of sample units—3, 6, 13, 21, 29.

[1] Acceptance number—0, 1, 2, 3, 4.

§ 52.1818 Grades.

(a) *U.S. Grade A* is the quality of canned white potatoes that meets the applicable requirements of Tables III through VII and scores not less than 80 points.

(b) *U.S. Grade B* is the quality of canned white potatoes that meets the applicable requirements of Table III through VII and scores not less than 80 points.

(c) *Substandard* is the quality of canned white potatoes that fails to meet the requirements for U.S. Grade B.

§ 52.1819 Factors of quality.

The grade of a lot of canned white potatoes is based on the following quality factors:

(a) Color;
(b) Uniformity of size and shape;
(c) Defects;
(d) Texture;
(e) Flavor and odor.

§ 52.1820 Requirements for grades.

TABLE III —WHOLE STYLE

Quality factors [1]	Grade A [2]	Grade B [3]
Color	Good	Reasonably Good.
Score	18–20 points	16–17 points.
Uniformity of size	Practically uniform	Reasonably uniform.
In the 90 percent (by count)[5] most uniform units, the weight of the largest unit is not more than	3.0 times the weight of the smallest unit.	4.0 times the weight of the smallest unit.
Score	18–20 points	16–17 points
Defects	Practically free	Reasonably free.
Mechanical damage, seriously blemished and blemished: Maximum	113.4g (4.0 oz)[4]	170.1g (6.0 oz.).[4]
Seriously blemished and blemished: Maximum	56.7g (2.0 oz.)[4]	113.4g (4.0 oz.).[4]
Seriously blemished: Maximum	28.4g (1.0 oz)[4]	56.7g (2.0 oz).[4]
Extraneous vegetable material (EVM)	1 piece/1.7kg (60.0 oz.) net wt.	3 pieces/1.7kg (60.0 oz.) net wt.
Sand, grit or silt	None	Trace.
Score	27–30 points	24–26 points.
Texture	Good	Reasonably good.
Score	27–30 points	24–26 points.
Total Score	90–100 points	80–89 points.
Flavor & Odor	Good	Reasonably good.

[1] All quality factors except EVM are based on a sample unit size of 567g (20 oz.).
[2] Can be reasonably uniform in size and shape if total score is 90 points or more.
[3] Can fail requirements for reasonably uniform size and shape if total score is 80 points or more.
[4] Or 1 unit provided the lot average does not exceed the prescribed requirement.
[5] Or 1 unit if the count is less than 10.

TABLE IV.—SLICED STYLE

Quality factors [1]	Grade A [2]	Grade B [3]
Color	Good	Reasonably good.
Score	18–20 points	16–17 points.
Uniformity of size & shape	Practically uniform	Reasonably uniform.
Maximum thickness	19mm (0.74 in)	25mm (0.98 in)
The diameter of the largest slice is not more than	1.5 times the diameter of the second smallest slice	2.0 times the diameter of the second smallest slice
Score	18–20 points	16–17 points.
Defects	Practically free	Reasonably free

Mechanical damage, seriously blemished & blemished:		
Maximum	85g (3.0 oz)	127.6g (4.5 oz).
Seriously blemished & blemished:		
Maximum	56.7g (2.0 oz)	85g (3.0 oz).
Seriously blemished:		
Maximum	14.2 (0.5 oz)	28.4g (1.0 oz).
Extraneous vegetable material (EVM)	1 piece/1.7kg (60.0 oz) net wt (sample average).	3 pieces/1.7kg (60.0 oz) net wt. (sample average).
Sand, grit or silt	None	Trace.
Score	27-30 points	24-26 points.
Texture	Good	Reasonably good.
Score	27-30 points	24-26 points.
Total Score	90-100 points	80-89 points.
Flavor & Odor	Good	Reasonably good.

[1] All quality factors except EVM are based on a sample unit size of 567g (20 oz).
[2] Can be reasonably uniform in size and shape if total score is 90 points or more.
[3] Can fail requirements for reasonably uniform size and shape if total score is 80 points or more.

TABLE V.—DICED STYLE

Quality factors [1]	Grade A [2]	Grade B [3]
Color	Good	Reasonably good.
Score	18-20 points	16-17 points.
Uniformity of size & shape	Practically uniform	Reasonably uniform.
Maximum allowance for irregular shaped units & units that are noticeably larger or smaller than the prevalent cube size	56.7g (2.0 oz)	141.8g (5.0 oz).
Score	18-20 points	16-17 points.
Defects	Practically free	Reasonably free.
Mechanical damage, seriously blemished & blemished:		
Maximum	56.7g (2.0 oz)	85g (3.0 oz).
Seriously blemished & blemished:		
Maximum	22.7g (0.8 oz)	34g (1.2 oz).
Seriously blemished:		
Maximum	5.7g (0.2 oz)	11.3g (0.4 oz).
Extraneous vegetable material (EVM)	1 piece/1.7kg (60.0 oz) net wt (sample average)	3 pieces/1.7kg (60.0 oz) net wt. (sample average).
Sand, grit or silt	None	Trace.
Score	27-30 points	24-26 points.
Texture	Good	Reasonably good.
Score	27-30 points	24-26 points.
Total Score	90-100 points	80-89 points.
Flavor & Odor	Good	Reasonably good.

TABLE V.—DICED STYLE—Continued

Quality factors [1]	Grade A [2]	Grade B [3]

[1] All quality factors except EVM are based on a sample unit size of 567g (20 oz).
[2] Can be reasonably uniform in size and shape if total score is 90 points or more.
[3] Can fail requirements for reasonably uniform size and shape if total score is 80 points or more.

TABLE VI.—FRENCH STYLE

Quality Factors [1]	Grade A [2]	Grade B [3]
Color	Good	Reasonably good.
Score	18-20 points	16-17 points.
Uniformity of size & Shape	Practically Uniform	Reasonably uniform.
Allowance for units less than 13mm (0.51 in) in length	56.7g (2.0 oz)	141.8g (5.0 oz).
Score	18-20 points	16-17 points.
Defects	Practically free	Reasonably free.
Mechanical damage, seriously blemished & blemished:		
Maximum	56.7g (2.0 oz)	85g (3.0 oz).
Seriously blemished & blemished:		
Maximum	22.7g (0.8 oz)	34g (1.2 oz).
Seriously blemished:		
Maximum	5.7g (0.2 oz)	11.3g (0.4 oz).
Extraneous vegetable material (EVM)	1 piece/1.7kg (60.0 oz) net wt. (sample average)	3 pieces/1.7kg (60.0 oz) net wt. (sample average).
Sand, grit or silt	None	Trace.
Score	27-30 points	24-26 points.
Texture	Good	Reasonably good.
Score	27-30 points	24-26 points.
Total Score	90-100 points	80-89 points.
Flavor & Odor	Good	Reasonably good.

[1] All quality factors except EVM are based on a sample unit size of 567g (20 oz).
[2] Can be reasonably uniform in size and shape if total score is 90 points or more.
[3] Can fail requirements for reasonably uniform size and shape if total score is 80 points or more.

TABLE VII—PIECES

Quality factors [1]	Grade A [2]	Grade B [3]
Color	Good	Reasonably good.
Score	18-20 points	16-17 points.

Uniformity of size & shape	Practically uniform	Reasonably uniform
Maximum allowance for units weighing less than 7.1g (0.25 oz)	28.4g (1.0 oz)	56.7g (2.0 oz)
Of those units weighing 7.1g (0.25 oz) or more, the weight of the largest unit is not more than	2.0 times the weight of the second smallest unit	4.0 times the weight of the second smallest unit
Score	18–20 points	16–17 points
Defects	Practically free	Reasonably free
Mechanical damage, seriously blemished & blemished:		
Maximum	85g (3.0 oz)	127.6g (4.5 oz)
Seriously blemished & blemished:		
Maximum	56.7g (2.0 oz)	85g (3.0 oz)
Seriously blemished:		
Maximum	14.2g (0.5 oz)	28.4g (1.0 oz)
Extraneous vegetable material (EVM)	1 piece/1.7kg (60.0 oz) net wt. (sample average)	3 pieces/1.7kg (60.0 oz) net wt. (sample average)
Sand, grit, or silt	None	Trace
Score	27–30 points	24–26 points
Texture	Good	Reasonably good
Score	27–30 points	24–26 points
Total Score	90–100 points	80–89 points
Flavor & Odor	Good	Reasonably good

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[1] All quality factors except EVM are based on a sample unit size of 567g (20 oz).

[2] Can be reasonably uniform in size and shape if total score is 90 points or more.

[3] Can fail requirements for reasonably uniform size and shape if total score is 80 points or more.

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§ 52.1821 Determining the grade of a lot.

The grade of a lot of canned white potatoes covered by these standards is determined by the procedures found in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

Subpart—United States Standards for Grades of Processed Raisins[1]

SOURCE: 41 FR 34751, Aug. 17, 1976, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.1841 Product description.

Processed Raisins are dried grapes of the Vinifera varieties, such as Thompson Seedless (Sultanina), Muscat of Alexandria, Muscatel Gordo Blanco, Sultana, Black Corinth or White Corinth. The processed raisins are prepared from clean, sound, dried grapes; are properly stemmed and capstemmed except for cluster or uncapstemmed raisins; are properly seeded in seeded styles; are sorted or cleaned, or both; and except for cluster or uncapstemmed raisins, are washed in water to assure a wholesome product.

§ 52.1842 Product description of Layer or (Cluster) raisins with seeds.

Raisins with Seeds that are referred to as "Layer or Cluster raisins" means that the raisins have not been detached from the main bunch.

§ 52.1843 Summary of types (varieties) of processed raisins.

(a) Type I—Seedless Raisins.

(1) Natural.

(2) Dipped, Vine-dried, or similarly processed raisins.

(b) Type II—Golden Seedless Raisins.

(c) Type III—Raisins with Seeds.

(1) Natural.

(i) Seeded (seeds removed).

(ii) Unseeded-capstemmed (loose).

(iii) Unseeded-uncapstemmed (loose).

(iv) Layer (or Cluster).

(2) Dipped, Vine-dried, or other similarly processed raisins.

(i) Seeded (seeds removed).

(ii) Unseeded-capstemmed (loose).

(iii) Unseeded-uncapstemmed (loose).

(d) Type IV—Sultana Raisins.

(e) Type V—Zante Currant Raisins.

(i) Unseeded.

(ii) Seeded.

(f) Type VI—Mixed Types or Varieties of Raisins. A mixture of two or more different types (varieties) of raisins including sub-types outlined in this section but other than: (1) Mixtures containing Layer or Cluster Raisins with seeds; (2) Mixtures containing Unseeded-capstemmed and Unseeded-uncapstemmed Raisins with Seeds; and (3) mixture of Seeded and Unseeded Raisins with Seeds.

§ 52.1844 Definition of terms.

(a) "Capstems" means small woody stems exceeding ⅛-inch in length which attach the raisins to the branches of the bunch.

(b) A "piece of stem" means a portion of the branch or main stem.

(c) "Seeds" refers to whole, fully developed seeds which have not been removed during the processing of seeded raisins with seeds.

(d) "Damaged raisins" means raisins affected by sunburn, scars, insect injury, mechanical injury, or other similar means which seriously affect the appearance, edibility, keeping quality, or shipping quality of the raisins. In seeded Raisins with Seeds, mechanical injury resulting from normal seeding operations is not considered damage.

(e) "Sugared" means either external or internal sugar crystals are present and the accumulation of such crystallized fruit sugars in the flesh or on the surface of the raisins is readily apparent.

(f) "Grit, sand, or silt" means any particle or earthy material.

(g) "Moisture" means the percentage by weight of the processed raisins, exclusive of branch and heavy stem material, that is moisture when determined by the "Dried Fruit Moisture Tester Method" or in accordance with other methods that give equivalent results.

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and Regulations.

(h) "Slightly discolored" means a raisin affected by a brown to dark brown discolored area around the capstem end of the raisin that is less than the area of a circle $^{1}/_{8}$-inch in diameter.

(i) "Discolored" means a raisin affected by a brown to dark brown discolored area around the capstem end of the raisin that equals or exceeds the area of a circle $^{1}/_{8}$-inch in diameter; *Provided*, That the overall appearance, keeping quality, and edibility of the product are not seriously affected.

(j) "Well-matured" means raisins that are full-fleshed, may have fine wrinkles and are rounded in appearance.

(k) "Reasonably well-matured" means raisins that are reasonably full-fleshed and may have shallow wrinkles with thick edged ridges.

(l) "Fairly well-matured" means raisins that are thin-fleshed and angular in appearance.

(m) "Substandard development" means raisins that are practically lacking in flesh.

(n) "Undeveloped" refers to extremely light berries that are lacking in sugary tissue indicating incomplete development; are reddish in color; are completely shriveled; have fine wrinkles on smaller units and moderately deep wrinkles on slightly larger units; and are commonly referred to as "worthless."

TYPE I—SEEDLESS RAISINS

§ 52.1845 Sizes of seedless raisins.

The size designations and measurement requirements for the respective sizes are:

(a) "Select" size raisins means that no more than 60 percent, by weight, of all the raisins will pass through round perforations $^{25}/_{64}$-inch in diameter, but not more than 10 percent, by weight, of all the raisins may pass through round perforations $^{20}/_{64}$-inch in diameter.

(b) "Small" or "midget" size raisins means that 95 percent, by weight, of all the raisins will pass through round perforations $^{24}/_{64}$-inch in diameter, and not less than 70 percent, by weight, of all raisins will pass through round perforations $^{22}/_{64}$-inch in diameter.

(c) "Mixed" size raisins means a mixture which does not meet either the requirements for "select" size or for "small" or "midget" size.

§ 52.1846 Grades of seedless raisins.

(a) "U.S. Grade A" is the quality of seedless raisins that have similar varietal characteristics; that have a good typical color; that have a good characteristic flavor; that show development characteristics of raisins prepared from well-matured grapes with not less than 80 percent, by weight, of raisins that are well-matured or reasonably well-matured; that contain not more than 18 percent, by weight, of moisture for all varieties of seedless raisins except the Monukka variety, which may contain not more than 19 percent, by weight, of moisture; and that meet the additional requirements outlined in Table I of this subpart.

(b) "U.S. Grade B" is the quality of seedless raisins that have similar varietal characteristics; that have a reasonably good typical color; that have a good characteristic flavor; that show development characteristics of raisins prepared from reasonably well-matured grapes with not less than 70 percent, by weight, of raisins that are well-matured or reasonably well-matured; that contain not more than 18 percent, by weight, of moisture for all varieties of seedless raisins except the Monukka variety, which may contain not more than 19 percent, by weight, of moisture; and that meet the additional requirements outlined in Table I of this subpart.

(c) "U.S. Grade C" is the quality of seedless raisins that have similar varietal characteristics; that have a fairly good typical color; that have a fairly good flavor; that show development characteristics of raisins prepared from fairly well-matured grapes with not less than 55 percent, by weight, of raisins that are well-matured or reasonably well-matured; that contain not more than 18 percent, by weight, of moisture for all varieties of seedless raisins except the Monukka variety, which may contain not more than 19 percent, by weight, of moisture; and that meet the additional requirements outlined in Table I of this subpart.

(d) "Substandard" is the quality of seedless raisins that fail to meet the requirements of U.S. grade C.

[43 FR 51754, Nov. 7, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

TABLE I—ALLOWANCES FOR DEFECTS IN TYPE I, SEEDLESS RAISINS AND TYPE II, GOLDEN SEEDLESS RAISINS

Defects	U.S. Grade A	U.S. Grade B	U.S. Grade C
		Maximum count (per 96 ounces)	
Pieces of stem	1	2	4
		Maximum count (per 16 ounces)	
Capstems	15	25	35
		Maximum (percent by weight)	
Sugared	5	10	15
Discolored, damaged or moldy raisins	4	6	9
Provided these limits are not exceeded:			
Damaged	2	3	5
Moldy	2	3	4
		Total	
Substandard development and undeveloped:			
Selected size	1	1½	2
Mixed size	1	2	3
Small (Midget) size	2	3	5
		Appearance or edibility of product	
Slightly discolored or damaged by fermentation or any other defect not described above.	May not be affected	May not be more than slightly affected.	May not be materially affected.
Grit, sand, or silt	None of any consequence may be present that affects the appearance or edibility of the product.		Not more than a trace may be present that affects the appearance or edibility of the product.

TYPE II—GOLDEN SEEDLESS RAISINS

§ 52.1847 Colors of golden seedless raisins.

The color of Golden Seedless Raisins is not a factor of quality for the purpose of these grades. The color requirements applicable to the respective color designations are as follows:

(a) "Well colored" means that the raisins are practically uniform in color and may range from yellow or golden to light amber color with a predominating yellow or golden color and that not more than ½ of 1 percent, by weight, of all the raisins may be definitely dark berries.

(b) "Reasonably well colored" means that the raisins are reasonably uniform in color and may range from yellow or golden or greenish yellow to light amber wherein the predominating color may be greenish yellow or light amber and that not more than 3 percent, by weight, of all the raisins may be definitely dark berries.

(c) "Fairly well colored" means that the raisins are fairly uniform in color and may range from yellow or greenish yellow to amber or light greenish amber and that not more than 6 percent, by weight, of all the raisins may be definitely dark berries.

(d) "Colored" means that the raisins may be variable in color and may range from yellowish green to dark amber or dark greenish amber; that not more than 20 percent, by weight, of all the raisins may be definitely dark berries.

(e) "Definitely dark berries" means raisins which are definitely darker than dark amber and characteristic of naturally "raisined" grapes.

§ 52.1848 Sizes of golden seedless raisins.

The size designations and measurement requirements for the respective sizes of Golden Seedless Raisins are the same as for Seedless Raisins (See § 52.1845).

§ 52.1849 Grades of golden seedless raisins.

Except for color, the grades of Golden Seedless Raisins are the same as for Seedless Raisins (See § 52.1846 and Table I).

TYPE III—RAISINS WITH SEEDS

§ 52.1850 Sizes of raisins with seeds—except layer or cluster.

The sizes of Raisins with Seeds—except for Layer or Cluster Raisins with Seeds, are not incorporated in the grades of the finished product since size, as such, is not a factor of quality for the purposes of these grades. The common size designations and measurement requirements applicable thereto include, but are not limited to, the following:

(a) *Seeded.* (1) "Select" size raisins means that not more than 70 percent, by weight, of the raisins will pass through round perforations $^{34}/_{64}$-inch in diameter; and not more than 5 percent, by weight, of the raisins will pass through round perforations $^{22}/_{64}$-inch in diameter.

(2) "Small" or "midget" size raisins means that all of the raisins will pass through round perforations $^{34}/_{64}$-inch in diameter and not less than 90 percent, by weight, of all the raisins will pass through round perforations $^{22}/_{64}$-inch in diameter.

(3) "Mixed" size raisins means a mixture which does not meet either the requirements for "select" size or for "small" (or "midget") size.

(b) *Unseeded.* (1) "4 Crown" means raisins that will not pass through round perforations $^{42}/_{64}$-inch in diameter.

(2) "3 Crown" means raisins that will pass through round perforations $^{42}/_{64}$-inch in diameter but will not pass through round perforations $^{34}/_{64}$-inch in diameter.

(3) "2 Crown" means raisins that will pass through round perforations $^{34}/_{64}$-inch in diameter but will not pass through round perforations $^{24}/_{64}$-inch in diameter.

(4) "1 Crown" means raisins that will pass through round perforations $^{24}/_{64}$-inch in diameter.

§ 52.1851 Sizes of raisins with seeds—layer or cluster.

The size of Layer or Cluster Raisins with Seeds is incorporated in the grades of the finished product. The size designation and measurement as applicable to layer or cluster raisins with seeds are:

(a) *3 Crown size or larger.* "3 Crown size or larger" in Layer or Cluster Raisins with Seeds means that the raisins, exclusive of stems and branches, are such a size that they will not pass through round perforations $^{34}/_{64}$-inch in diameter.

§ 52.1852 Grades of raisins with seeds—except layer or cluster.

(a) "U.S. Grade A" is the quality of Raisins with Seeds that have similar varietal characteristics; that have a good typical color with not more than 10 percent, by weight, that may be dark reddish-brown berries; that have a good characteristic flavor; that show development characteristics of raisins prepared from well-matured grapes; with not less than 80 percent, by weight, of raisins that are well-matured or reasonably well-matured; that contain not more than 18 percent, by weight, of moisture, except that any seeded raisins may contain not more than 19 percent, by weight, of moisture; and meet the additional requirements as outlined in Table II of this subpart.

(b) "U.S. Grade B" is the quality of Raisins with Seeds that have similar varietal characteristics; that have a reasonably good typical color with not more than 15 percent, by weight, that may be dark reddish-brown berries; that have a good characteristic flavor; that show development characteristics of raisins prepared from reasonably well-matured grapes; with not less than 70 percent, by weight, of raisins that are well-matured or reasonably well matured; that contain not more than 18 percent, by weight, of moisture, except that any seeded raisins may contain not more than 19 percent, by weight, of moisture; and meet the additional requirements as outlined in Table II of this subpart.

(c) "U.S. Grade C" is the quality of Raisins with Seeds that have similar varietal characteristics; that have a fairly good typical color with not more than 20 percent, by weight, that may be dark reddish-brown berries; that have a fairly good flavor; that show development characteristics of raisins prepared from fairly well-matured grapes; that contain not more than 18 percent, by weight, of moisture, except that any seeded raisins may contain not more than 19 percent, by weight, of moisture; and meet the additional requirements as outlined in Table II of this subpart.

(d) "Substandard" is the quality of Raisins with Seeds that fail to meet the requirements of U.S. Grade C.

TABLE II—ALLOWANCES FOR DEFECTS IN RAISINS WITH SEEDS—EXCEPT LAYER OR CLUSTER

Defects	U.S. Grade A	U.S. Grade B	U.S. Grade C
	Maximum count (per 32 ounces)		
Pieces of stem	7	2	3
	Maximum count (per 16 ounces)		
Capstems in other than uncapstemmed types	10	15	20
Seeds in seeded types	12	15	20
Loose capstems in uncapstemmed types	20	20	20
	Maximum (percent by weight)		
Sugared	5	10	15
Discolored, damaged, or moldy	5	7	9
Provided these limits are not exceeded:			
Damaged	3	4	5
Moldy	2	3	4
Substandard development and undeveloped	2	5	8
	Appearance or edibility of product		
Slightly discolored or damaged by fermentation or any other defect not described above.	May not be affected	May not be more than slightly affected.	May not be more than materially affected.
Grit, sand, or silt	None of any consequence may be present that affects the appearance or edibility of the product.		Not more than a trace may be present that affects the appearance or edibility of the product.

§ 52.1853 Grades of raisins with seeds—layer or cluster.

(a) "U.S. Grade A" is the quality of Layer or Cluster Raisins with Seeds that have similar varietal characteristics; that have a good typical color; that have a good characteristic flavor; that are uniformly cured and show development characteristics of raisins prepared from well-matured grapes; that contain not more than 23 percent, by weight, of moisture; that not less than 30 percent, by weight, of the raisins, exclusive of stems and branches, are 3-Crown size or larger; and that meet the following additional requirements as outlined in Table III of this subpart.

(b) "U.S. Grade B" is the quality of Layer or Cluster Raisins with Seeds that have similar varietal characteristics that have a reasonably good typical color; that have a good characteristic flavor; that are uniformly cured and show development characteristics of raisins prepared from reasonably well-matured grapes; that contain not more than 23 percent, by weight, of the moisture, that not less than 30 percent, by weight, of the raisins exclusive of stems and branches, are 3-Crown size or larger; and that meet the additional requirements outlined in Table III of this subpart.

(c) "Substandard" is the quality of Layer or Cluster Raisins with Seeds that fail to meet the requirements of U.S. Grade B.

TABLE III—ALLOWANCE FOR DEFECTS IN LAYER OR CLUSTER RAISINS WITH SEEDS

Defects	U.S. Grade A	U.S. Grade B
	Maximum (percent by weight)	
Sugared	5	10
Discolored, damaged, or moldy	5	7
Provided these limits are not exceeded:		
Damaged	3	4
Moldy	2	3
Substandard development and undeveloped	2	5
Shattered (or loose) individual berries and small clusters of 2 or 3 berries each.	Practically free	Reasonably free
	Appearance or edibility of product	
Slightly discolored or damaged by fermentation or any other defect not described above.	May not be affected	May not be more than slightly affected.
Grit, sand, or silt	None of any consequence may be present that affects the appearance or edibility of the product.	

TYPE IV—SULTANA RAISINS

§ 52.1854 Sizes of Sultana raisins.

Size designations are not applicable to Sultana Raisins.

§ 52.1855 Grades of Sultana raisins.

(a) "U.S. Grade A" is the quality of Sultana Raisins that have similar varietal characteristics; that have a good typical color; that have a good characteristic flavor; that show development characteristics of raisins prepared from well-matured grapes; with not less than 80 percent, by weight, of raisins that are well-matured or reasonably well-matured; and that contain not more than 18 percent, by weight, of moisture, and that meet the additional requirements outlined in Table IV of this subpart.

(b) "U.S. Grade B" is the quality of Sultana Raisins that have similar varietal characteristics; that have a reasonably good typical color; that have a good characteristic flavor; that show development characteristics of raisins prepared from reasonably well-matured grapes; with not less than 70 percent, by weight, of raisins that are well-matured or reasonably well-matured; and that contain not more than 18 percent, by weight, of moisture, and that meet the additional requirements as outlined in Table IV of this subpart.

TABLE IV—ALLOWANCES FOR DEFECTS IN SULTANA RAISINS

Defects	U.S. Grade A	U.S. Grade B	U.S. Grade C
	Maximum count (per 32 ounces)		
Pieces of stem	1	2	3
	Maximum count (per 16 ounces)		
Capstems	25	45	65
	Maximum (percent by weight)		
Sugared	5	10	15
Discolored, damaged, or moldy	4	6	9
Provided these limits are not exceeded:			
Damaged	2	3	5
Moldy	2	3	4
Substandard development and undeveloped	2	5	8
	Appearance or edibility of product		
Slightly discolored or damaged by fermentation or any other defect not described above.	May not be affected	May not be more than slightly affected.	May not be more than materially affected.
Grit, sand, or silt	None of any consequence may be present that affects the appearance or edibility of the product.		Not more than a trace may be present that affects the appearance or edibility of the product.

(c) "U.S. Grade C" is the quality of Sultana Raisins that have similar varietal characteristics; that have a fairly good typical color; that have a fairly good flavor; that show development characteristics of raisins prepared from fairly well-matured grapes; that contain not more than 18 percent, by weight, of moisture; and that meet the additional requirements as outlined in Table IV of this subpart.

(d) "Substandard" is the quality of Sultana Raisins that fail to meet the requirements of U.S. Grade C.

TYPE V—ZANTE CURRANT RAISINS

§ 52.1856 Sizes of zante currant raisins.

Size designations are not applicable to Zante Currant Raisins.

§ 52.1857 Grades of zante currant raisins.

(a) "U.S. Grade A" is the quality of Zante Currant Raisins that have similar varietal characteristics; that have a good typical color; that have a good characteristic flavor; that show development characteristics of raisins prepared from well-matured grapes; that have not less than 75 percent, by weight, of raisins that are well-matured or reasonably well matured; that contain not more than 20 percent, by weight, of moisture; and meet the additional requirements as outlined in Table V of this subpart.

TABLE V—Allowances for Defects in Zante Currant Raisins

Defects	Maximum count	
	U.S. Grade A	U.S. Grade B
Pieces of stem	1 per 24 ounces	1 per 16 ounces.
Seeds (in Seeded style)	12 per 16 ounces	15 per 16 ounces.
	Maximum (percent by weight)	
Capstems -- Zantes with capstems and loose capstems (include one Zante with each loose capstem).	1½	2
Sugared	5	10
Discolored, damaged, or moldy	5	7
Provided these limits are not exceeded:		
Damaged	2	3
Moldy	3	4
Substandard Development and Undeveloped	2	5
	Appearance or edibility of product	
Slightly discolored or damaged by fermentation or any other defect not described above.	May not be affected	May not be more than slightly affected.
Grit, sand, or silt	None of any consequence may be present that affects the appearance or edibility of the product.	

(b) "U.S. Grade B" is the quality of Zante Currant Raisins that have similar varietal characteristics; that have a reasonably good typical color; that have a good characteristic flavor; that have development characteristics of raisins prepared from reasonably well-matured and/or fairly well matured grapes; that contain not more than 20 percent, by weight, of moisture; and meet the additional requirements as outlined in Table V of this subpart.

(c) "Substandard" is the quality of Zante Currant Raisins that fail to meet the requirements of U.S. Grade B.

TYPE VI—MIXED TYPES OF RAISINS

§ 52.1858 Grades of mixed types or varieties of raisins.

The grade of a lot of mixed types of processed raisins shall be the lower (or lowest) grade of any varietal type in the mixture based on the respective requirements for each type, except for moisture, in accordance with this subpart. Mixed types of processed raisins of U.S. Grade A, U.S. Grade B, or U.S. Grade C may contain not more than 18 percent, by weight, of moisture. Mixed types of processed raisins that as a mixture exceed 18 percent, by weight, of moisture are "Substandard."

Subpart—United States Standards for Grades of Frozen Raspberries

SOURCE: 18 FR 8050, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.1871 Product description.

Frozen raspberries are prepared from the properly ripened fresh fruit of the plant (Genus rubus); are stemmed and cleaned; may be packed with or without packing media; and are frozen and stored at temperatures necessary for the preservation of the product.

§ 52.1872 Types (colors) of frozen raspberries.

(a) "Red" or "red raspberries" are red or reddish purple in color.

(b) "Black" or "black raspberries" are black in color.

§ 52.1873 Grades of frozen raspberries (not for manufacturing).

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen raspberries that possess similar varietal characteristics; possess a bright, practically uniform, typical color; are practically free from defects; possess a good character; possess a normal flavor and odor; and score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen raspberries that possess similar varietal characteristics; possess a reasonably bright, reasonably uniform, typical color; are reasonably free from defects; possess a reasonably good character; possess a normal flavor and odor; and score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Substandard" is the quality of frozen raspberries that fail to meet the requirements of "U.S. Grade B" or "U.S. Choice."

§ 52.1874 Grades of frozen raspberries for manufacturing.

(a) "U.S. Grade A for Manufacturing" or "U.S. Fancy for Manufacturing" is the quality of frozen raspberries that possess similar varietal characteristics; that possess a bright, practically uniform, typical color; that are practically free from defects for the purposes of manufacturing; that possess a good character for the purposes of manufacturing; and that possess a normal flavor and odor.

(b) "U.S. Grade B for Manufacturing" or "U.S. Choice for Manufacturing" is the quality of frozen raspberries that possess similar varietal characteristics; that possess a reasonably bright, reasonably uniform, typical color; that are reasonably free from defects for the purposes of manufacturing; that possess a reasonably good character for the purposes of manufacturing; and that possess a normal flavor and odor.

(c) "U.S. Grade D for Manufacturing" or "Substandard for Manufacturing" is the quality of frozen raspberries that fail to meet the requirements of "U.S. Grade B for Manufacturing" or "U.S. Choice for Manufacturing."

FACTORS OF QUALITY

§ 52.1875 Ascertaining the score and grade for frozen raspberries (not for manufacturing).

(a) The grade of frozen raspberries is determined immediately after thawing to the extent that the units may be separated easily. The score and grade of frozen raspberries may be ascertained by considering, in addition to the requirements of the respective grade, the following factors: Color, absence of defects, and character.

(b) The relative importance of each factor has been expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Color	40
Absence of defects	40
Character	20
Total score	100

(c) "Normal flavor and odor" means that the raspberries are free from objectionable flavors, off flavors, and objectionable odors of any kind.

§ 52.1876 Ascertaining the score of each factor for frozen raspberries (not for manufacturing).

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "34 to 40 points" means 34, 35, 36, 37, 38, 39, or 40 points).

§ 52.1877 Color.

(a) (*A*) *classification.* Frozen raspberries that possess a bright, practically uniform, typical color may be given a score of 34 to 40 points. "Bright, practically uniform, typical color" means that the raspberries possess a bright and good characteristic color; that not more than 5 percent, by weight, of the raspberries vary markedly from the intensity and luster of the characteristic color of well-ripened raspberries; and that none of the raspberries possess a grey cast or darkening characteristic of oxidation or overmaturity.

(b) (*B*) *classification.* If the frozen raspberries possess a reasonably bright, reasonably uniform, typical color, a score of 28 to 33 points may be given. Frozen raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably bright, reasonably uniform, typical color" means that the raspberries possess a reasonably bright, reasonably good characteristic color; that not more than 10 percent, by weight, of the raspberries vary markedly from the intensity and luster of the characteristic color of well-ripened raspberries; and that the raspberries may possess a slight grey cast or slight darkening characteristic of oxidation or overmaturity.

(c) (*SStd*) *classification.* Frozen raspberries that are definitely dull or off-color or that fail to meet the requirements of paragraph (b) of this section, may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

(d) *Evaluation of score points.* The evaluation of the score points for the factor of color may be determined from Table No. I of this section which indicates the score range in the respective grades and the maximum allowances for frozen raspberries that vary markedly from the intensity and luster of the characteristic color of well-ripened raspberries.

TABLE I

Grade	Score points	Typical color	Marked variation from color of well-ripened raspberries Maximum (by weight) (percent)
U.S. Grade A or U.S. Fancy	40	Bright, good characteristic color; none may possess a grey cast or darkening (oxidation or overmaturity).	None
	39		½
	38		1
	37		2
	36		3
	35		4
	34		5
U.S. Grade B of U.S. Choice.	33	Reasonably bright, reasonably good; may possess slight grey cast or slight darkening (oxidation or overmaturity).	5½
	32		6
	31		7
	30		8
	29		9
	28		10
U.S. Grade D or Substandard.	27 or less	More than the allowances permitted for 28 points	

§ 52.1878 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material, caps and portions thereof, sepal-like bracts and portions thereof, stems, undeveloped raspberries, and damaged raspberries.

(1) "Harmless extraneous material" means vegetable substances such as weeds, grass, and leaves and any portions thereof that are harmless.

(2) A "cap" means a loose or attached full cap or a portion of a cap to which at least one sepal-like bract or portion thereof is attached. A "stem" that is attached to the cap is considered a separate defect.

(3) A "stem" means a stem, either loose or attached, that is longer than ¼ inch.

(4) An "undeveloped raspberry" means a raspberry or a portion of a raspberry that is shriveled or in which more than one-fourth of the raspberry

possesses hard or undeveloped drupelets or that possesses deformed areas which materially affect either the appearance or the edibility of the product.

(5) A "damaged raspberry" means a raspberry or a portion of a raspberry that is damaged by bruises or by pathological, insect, or other injury or is damaged by other means which materially affect either the appearance or the edibility of the product. "Damage" includes any surface blemish or blemishes on a raspberry which in the aggregate exceed that of a circle ¼ inch in diameter or any noticeable blemish, regardless of area, that extends into the fruit tissue. Minute, insignificant injuries are not considered as damage.

(6) "Area" means the aggregate surface covered by the material stated when such material or portions thereof are placed in a contiguous position with no intervening spaces.

(b) (*A*) *classification.* Frozen raspberries that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that there may be present for each 16 ounces of net weight an area of not more than ¼ square inch comprising harmless extraneous material (such as leaves and portions thereof), caps and portions thereof, and loose sepal-like bracts and portions thereof; and not more than 2 stems, including not more than 1 stem which may exceed ½ inch in length, or 1 piece of harmless extraneous material that is not measurable by area (such as weeds and blades of grass); and that there may be present not more than a total of 5 percent, by weight, of raspberries that are undeveloped raspberries and damaged raspberries.

(c) (*B*) *classification.* If the frozen raspberries are reasonably free from defects, a score of 28 to 33 points may be given. Frozen raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present for each 16 ounces of net weight an area of not more than ½ square inch comprising harmless extraneous material (such as leaves and portions thereof), caps and portions thereof, and loose sepal-like bracts and portions thereof; and not more than 4 stems including not more than 1 stem which may exceed ½ inch in length, or 1 piece of harmless extraneous material that is not measurable by area (such as weeds and blades of grass); and that there may be present not more than a total of 10 percent, by weight, of raspberries that may be undeveloped raspberries and damaged raspberries.

(d) (*SStd*) *classification.* Frozen raspberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

(e) *Evaluation of score points.* The evaluation of the score points for the factor of absence of defects may be determined from Table No. II which indicates the maximum allowances for each class of defects for the score indicated.

TABLE II—ALLOWANCES FOR DEFECTS

Grade	Score points	Harmless extraneous material (leaves, etc.) caps, sepal-like bracts and portions thereof	Harmless extraneous material (weeds, grass) and stems (including stems over ½ inch)			Undeveloped and damaged raspberries
		Maximum				
		Per 16 ounces of net weight				By weight
			Stems			
			Total	Over ½"	Harmless material	Percent
U.S. Grade A or U.S. Fancy	40	None	None	None	None	None
	39	⅛ square inch	1	None	None	½
U.S. Grade A or U.S. Fancy	38	⅛ square inch	1	None	None	1
	37	⅛ square inch	1	None or	1 piece	2
	36	¼ square inch	2	1 or	1 piece	3
	35	¼ square inch	2	1 or	1 piece	4
	34	¼ square inch	2	1 or	1 piece	5
U.S. Grade B or U.S. Choice	33	⅜ square inch	3	1 or	1 piece	5½
	32	⅜ square inch	3	1 or	1 piece	6
	31	⅜ square inch	3	1 or	1 piece	7
	30	½ square inch	4	1 or	1 piece	8
	29	½ square inch	4	1 or	1 piece	9
	28	½ square inch	4	1 or	1 piece	10
U.S. Grade D or Substandard	(1)	(2)	(2)	(2)	(2)	(2)

[1] 27 or less.

[2] More than the allowances permitted for 28 points.

§ 52.1879 Character.

(a) *General.* The factor of character refers to the texture and degree of maturity and degree of disintegration as evidenced by crushed raspberries.

(1) A "crushed" raspberry is a raspberry in which more than 50 percent of the drupelets are crushed, broken, or detached, or if the normal shape of the raspberry is otherwise seriously affected or destroyed.

(b) (*A*) *classification.* Frozen raspberries that possess a good character may be given a score of 17 to 20 points. "Good character" means that the raspberries are mature, well-developed, and practically intact to the extent that not more than 5 percent, by weight, of the raspberries may be slightly immature or slightly overmature; that the raspberries are fleshy and tender; that the raspberries and accompanying liquor, if any, are practically free from detached seed cells; that not more than 10 percent, by weight, of red raspberries may be crushed; and that not more than 5 percent, by weight, of black raspberries may be crushed.

(c) (*B*) *classification.* If the frozen raspberries have a reasonably good character, a score of 14 to 16 points may be given. Frozen raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the raspberries are reasonably mature, reasonably well-developed, and reasonably intact to the extent that not more than 10 percent, by weight, of the raspberries may be slightly immature or slightly overmature; that the raspberries are reasonably fleshy and reasonably tender; that the raspberries and accompanying liquor, if any, are reasonably free from detached seed cells; that not more than 20 percent, by weight, of red raspberries may be crushed; and that not more than 15 percent, by weight, of black raspberries may be crushed.

(d) (*SStd*) *classification.* Frozen raspberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

(e) *Evaluation of score points.* The evaluation of the score points for the factor of character may be determined from Table No. III of this section which indicates the general requirements for texture and intactness, and the maximum allowances for variation in maturity and for crushed raspberries for the score indicated.

TABLE NO. III—CHARACTER

Grade	Score points	General description of texture and intactness	Maximum (by weight and percent)		
			Slightly immature and slightly over mature	Crushed	
				Red raspberries	Black raspberries
U.S. Grade A or U.S. Fancy.	20	Mature, well-developed, practically intact, fleshy and tender, practically free from seed cells.	2	4	2
	19		3	6	3
	18		4	8	4
	17		5	10	5
U.S. Grade B or U.S. Choice.	16	Reasonably mature, reasonably well-developed, reasonably intact, reasonably fleshy and tender, reasonably free from seed cells.	7	12	9
	15		9	16	12
	14		10	20	15
U.S. Grade D or Substandard.	13 or less	More than the allowances permitted for 14 score points.			

§ 52.1880 Determination of the grades of frozen raspberries for manufacturing.

(a) The grade of frozen raspberries for manufacturing is determined immediately after thawing a sample to the extent that the units may be separated easily. The grade of frozen raspberries for manufacturing is ascertained by considering the following factors, and for which no scoring system is provided: Color, absence of defects, and character.

(b) "Normal flavor and odor" means that the raspberries are free from objectionable flavors, off flavors, and objectionable odors of any kind.

§ 52.1881 Ascertaining the rating of each factor for frozen raspberries for manufacturing.

(See Table No. IV, § 52.1884, which is a brief summary of requirements for grades of frozen raspberries for manufacturing.)

§ 52.1882 Color.

(a) (*A*) *classification.* "U.S. Grade A for Manufacturing" or "U.S. Fancy for Manufacturing" requires that the frozen raspberries shall possess a bright, practically uniform, typical color. "Bright, practically uniform, typical color" means that the raspberries, possess a bright and good characteristic color; that not more than 5 percent, by weight, of the raspberries vary markedly from the intensity and luster of the characteristic color of well-ripened raspberries; and that none of the raspberries possess a grey cast or darkening characteristic of oxidation or over-maturity.

(b) (*B*) *classification.* "U.S. Grade B for Manufacturing" or "U.S. Choice for Manufacturing" requires that the frozen raspberries shall possess a reasonably bright, reasonably uniform typical color. "Reasonably bright, reasonably uniform, typical color" means that the raspberries possess a reasonably bright, reasonably good characteristic color; that not more than 10 percent, by weight, of the raspberries vary markedly from the intensity and luster of the characteristic color of well-ripened raspberries; and that the raspberries may possess a slight grey cast or slight darkening characteristic of oxidation or over-maturity.

(c) (*SStd*) *classification.* Frozen raspberries for manufacturing that fail to meet the requirements of paragraph (b) of this section for the factor of color shall be considered U.S. Grade D for Manufacturing or Substandard for Manufacturing.

§ 52.1883 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material, caps and portions thereof, sepal-like bracts and portions thereof, stems, undeveloped raspberries, and damaged raspberries.

(1) "Harmless extraneous material" means vegetable substances such as weeds, grass, and leaves and any portions thereof that are harmless.

(2) A "cap" means a loose or attached full cap or a portion of a cap to which at least one sepal-like bract or portion thereof is attached. A "stem" that is attached to the cap is considered a separate defect.

(3) A "stem" means a stem, either loose or attached, that is longer than ¼ inch.

(4) An "undeveloped raspberry" means a raspberry or a portion of a raspberry that is shriveled or in which more than one-fourth of the raspberry possesses hard undeveloped drupelets or that possesses deformed areas which materially affect either the appearance or the edibility of the product.

(5) A "damaged raspberry" means a raspberry or a portion of a raspberry that is damaged by bruises or pathological, insect, or other injury or is damaged by other means which materially affect either the appearance or the edibility of the product. "Damage" includes any surface blemish or blemishes on a raspberry which in the aggregate exceed that of a circle ¼ inch in diameter or any noticeable blemish, regardless of area, that extends into the fruit tissue. Minute, insignificant injuries are not considered as damage.

(6) "Area" means the aggregate surface covered by the material stated when such material or portions thereof are placed in a contiguous position with no intervening spaces.

(b) (*A*) *classification.* "U.S. Grade A for Manufacturing" or "U.S. Fancy for Manufacturing" requires that the frozen raspberries shall be practically free from defects for the purposes of manufacturing. "Practically free from defects for the purposes of manufacturing" means that there may be present for each 16 ounces of net weight an area of not more than ¼ square inch comprising harmless extraneous material (such as leaves and portions thereof), caps and portions thereof, and loose sepal-like bracts and portions thereof; and not more than 2 stems, including not more than 1 stem which may exceed ½ inch in length, or 1 piece of harmless extraneous material that is not measurable by area (such as weeds and blades of grass); and that there may be present not more than a total of 10 percent, by weight, of raspberries that are undeveloped raspberries and damaged raspberries.

(c) (*B*) *classification.* "U.S. Grade B for Manufacturing" or "U.S. Choice for Manufacturing" requires that the frozen raspberries shall be reasonably free from defects for the purposes of manufacturing. "Reasonably free from defects for the purposes of manufacturing" means that there may be present for each 16 ounces of net weight an area of not more than ½ square inch comprising harmless extraneous material (such as leaves and portions thereof), caps and portions thereof, and loose sepal-like bracts and portions thereof; and not more than 4 stems, including not more than 1 stem which may exceed ½ inch in length, or 1 piece of harmless extraneous material that is not measurable by area (such as weeds and blades of grass); and that there may be present not more than a total of 20 percent, by weight, of raspberries that are undeveloped raspberries and damaged raspberries.

(d) (*SStd*) *classification*. Frozen raspberries for manufacturing that fail to meet the requirements of paragraph (c) of this section for the factor of absence of defects shall be considered U.S. Grade D for Manufacturing or Substandard for Manufacturing.

§ 52.1884 Character.

(a) *General*. The factor of character refers to the texture and degree of maturity and degree of disintegration as evidenced by crushed raspberries.

(1) A "crushed" raspberry is a raspberry in which more than 50 percent of the drupelets are crushed, broken, or detached, or if the normal shape of the raspberry is otherwise seriously affected or destroyed.

TABLE NO. IV—BRIEF SUMMARY OF REQUIREMENTS FOR GRADES OF FROZEN RASPBERRIES FOR MANUFACTURING

Grades	Color	
	Typical color	Marked variation from color of well-ripened raspberries, maximum (by weight) (percent)
U.S. Grade A for manufacturing or U.S. Fancy for manufacturing.	Bright, good characteristic color; none may possess a grey cast or darkening (oxidation or overmaturity).	
U.S. Grade B for manufacturing or U.S. Choice for manufacturing.	Reasonably bright, reasonably good; may possess a slight grey cast or slight darkening (oxidation or overmaturity).	10

Grades	Absence of defects		
	Harmless extraneous material (leaves, etc.), caps, sepal-like bracts and portions thereof	Harmless extraneous material (weeds, grass) and stems (including stems over ½ inch)	Undeveloped and damaged raspberries
	Maximum		
	Per 16 ounces of net weight		By weight (percent)
U.S. Grade A for manufacturing or U.S. Fancy for manufacturing.	¼ square inch	2 stems, including 1 stem that may exceed ½ inch, or 1 piece harmless material.	10
U.S. Grade B for manufacturing or U.S. Choice for manufacturing.	½ square inch	4 stems, including 1 stem that may exceed ½ inch, or 1 piece harmless material.	20

Grades	Character		
	General description of texture and intactness	Maximum (by weight) (percent)	
		Slightly immature and slightly over-mature	Crushed raspberries
U.S. Grade A for manufacturing or U.S. Fancy for manufacturing.	Good character for purposes of manufacturing: reasonably mature, reasonably well-developed, reasonably intact, reasonably fleshy and reasonably tender, reasonably free from seed cells.	10	25
U.S. Grade B for manufacturing or U.S. Choice for manufacturing.	Reasonably good character for purposes of manufacturing: fairly mature, fairly well-developed, fairly intact, fairly fleshy and fairly tender, fairly free from seed cells.	15	50

(b) (*A*) *classification.* "U.S. Grade A for Manufacturing" or "U.S. Fancy for Manufacturing" requires that the frozen raspberries shall possess a good character for the purposes of manufacturing. "Good character for the purposes of manufacturing" means that the raspberries are reasonably mature, reasonably well-developed, and reasonably intact to the extent that not more than 10 percent, by weight, of the raspberries may be slightly immature or slightly over-mature; that the raspberries are reasonably fleshy and reasonably tender; that the raspberries and accompanying liquor, if any, are reasonably free from detached seed cells, and that not more than 25 percent, by weight, of the raspberries may be crushed.

(c) (*B*) *classification.* "U.S. Grade B for Manufacturing" or "U.S. Choice for Manufacturing" requires that the frozen raspberries shall possess a reasonably good character for the purposes of manufacturing. "Reasonably good character for the purposes of manufacturing" means that the raspberries are fairly mature, fairly well-developed, and fairly intact to the extent that not more than 15 percent, by weight, of the raspberries may be slightly immature or slightly over-mature; that the raspberries are fairly fleshy and fairly tender; that the raspberries and accompanying liquor, if any, are fairly free from detached seed cells; that not more than 50 percent, by weight, of the raspberries may be crushed.

(d) (*SStd*) *classification.* Frozen raspberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D for Manufacturing or Substandard for Manufacturing.

LOT INSPECTION AND CERTIFICATION

§ 52.1885 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1886 Score sheet for frozen raspberries (not for manufacturing).

Size and kind of container ....
Container mark or identification ....
Label (style of pack: Ratio of fruit to sugar, etc., if shown) ....
Type (color), if known ....

Factors		Score points	
Color	40	(A)	34-40
		(B)	[1]28-33
		(D)	[1]0-27
Absence of defects	40	(A)	34-40
		(B)	[1]28-33
		(D)	[1]0-27
Character	20	(A)	17-20
		(B)	[1]14-16
		(D)	[1]0-13
Total score	100		

Normal flavor and odor ....

Grade	

¹ Indicates limiting rule within classification.

Subpart—United States Standards for Grades of Canned Spinach [1]

SOURCE: 35 FR 3745, Feb. 26, 1970, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, GRADES

§ 52.1901 Product description.

"Canned Spinach", as defined in the definitions and standards of identity for canned vegetables (21 CFR 155.200) issued pursuant to the Federal Food, Drug, and Cosmetic Act, means the product properly prepared from the succulent leaves of the spinach plant and is packed with the addition of water in hermetically sealed containers and sufficiently processed by heat to prevent spoilage. Citric acid or a vinegar may be added in a quantity not more than sufficient to permit effective processing by heat without discoloration or other impairment of the product. One or more of the optional seasoning ingredients specified in the aforesaid standards of identity may be added.

§ 52.1902 Styles of canned spinach.

(a) "Whole leaf" spinach consists substantially of the leaf and adjoining portion of the stem.

(b) "Cut leaf" or "Sliced" spinach consists of the leaf and adjoining portion of stem that has been cut predominantly into large pieces approximating three-fourths inch or more in the longest dimension or cut predominantly into approximate strips.

(c) "Chopped" spinach consists of the leaf and adjoining portion of stem that has been cut predominantly into small pieces less than approximately three-fourths inch in the longest dimension.

§ 52.1903 Grades of canned spinach.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned spinach that has a good flavor and ordor and is attractive in appearance and eating quality within the limitations set forth in this subpart as to:

(1) Color,
(2) Character,
(3) Stem material,
(4) Damage, and
(5) Harmless extraneous material.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of canned spinach that has a good flavor and odor and is reasonably attractive in appearance and eating quality within the limitations set forth in this subpart as to:

(1) Color,
(2) Character,
(3) Stem material,
(4) Damage, and
(5) Harmless extraneous material.

(c) "Substandard" is the quality of canned spinach that fails to meet the requirements for "U.S. Grade B".

DEFINITIONS OF TERMS AND SYMBOLS

§ 52.1904 Definitions of terms and symbols.

(a) *Terms.*

Defect	Any specifically defined variation from a particular requirement.
Deviant	A sample unit that exceeds an upper limit (such as for stem material or various defect classifications) or fails to meet a lower limit (such as drained weights).
Sample	Any number of sample units to be used for inspection of a lot.
Sample unit	The entire contents of a container, a portion of the contents of a container, or a combination of the contents of two or more containers as specified to be used for inspection.
Sample average value	The numerical value calculated by dividing the total number of applicable defects in a sample by the total number of sample units in that sample.

(b) *Symbols.*

X_a	Minimum sample average drained weight.
LL	Lower limit for individual drained weights.

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

UL	Upper limit is the value which represents the maximum amount of stem material or the maximum number of defects a sample unit may have for a grade classification.

FILL OF CONTAINER

§ 52.1905 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. The recommended fill of container for canned spinach is the maximum amount of spinach that can be sealed in a container and processed by heat without impairment of quality. It is recommended that the product and packing medium occupy not less than 90 percent of the water capacity of the container.

RECOMMENDED DRAINED WEIGHTS

§ 52.1906 Recommended drained weights.

(a) *General.* The recommended drained weight values in Table I of this subpart are not incorporated in the grades of the finished product, since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining drained weight.* (1) The drained weight of canned spinach is determined when the product is at approximately room temperature (68° F.). The contents of the container is emptied upon a dry, previously weighed, U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch, ±3 percent, square openings). With the sieve flat on the tray, the container of spinach is placed open end down in the sieve in an upright position. The container is lifted off the spinach without spreading the spinach out on the sieve. The spinach is allowed to drain for exactly 2 minutes. The weight of the spinach and sieve minus the weight of the dry seive is the drained weight of the spinach.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED SPINACH

Container designation (metal, unless otherwise stated)	Container size overall dimensions		Capacity—weight H_2O at 68° F. (avoirdupois ounces)	Minimum drained weight (avoirdupois ounces)	
	Diameter (inches)	Height (inches)		(LL)	(X_d)
8Z tall	$2\frac{11}{16}$	$3\frac{4}{16}$	8.65	4.8	5.2
No. 1 picnic	$2\frac{11}{16}$	4	10.90	6.3	6.8
No. 300	3	$4\frac{7}{16}$	15.20	8.6	9.1
No. 1 tall	$3\frac{1}{16}$	$4\frac{11}{16}$	16.60	9.4	10.0
No. 303	$3\frac{3}{16}$	$4\frac{6}{16}$	16.85	9.6	10.2
No. 303 glass			17.70	9.4	10.0
No. 2	$3\frac{7}{16}$	$4\frac{9}{16}$	20.50	11.9	12.6
No. 2½	$4\frac{1}{16}$	$4\frac{11}{16}$	29.75	17.6	18.6
No. 2½ glass			29.50	15.8	16.6
No. 10	$6\frac{3}{16}$	7	109.45	54.7	58.4

(2) A sieve 8 inches in diameter is used for the equivalent of a No. 3 size can (404×700) and smaller and a sieve 12 inches in diameter is used for containers larger than the equivalent of a No. 3 size can.

FACTORS OF QUALITY

§ 52.1907 Factors of quality.

The grade of a lot of canned spinach is based on requirements for product characteristics with respect to the following quality factors:

(a) Flavor and odor.
(b) Color.
(c) Character.
(d) Stem material.
(e) Damage.
(f) Harmless extraneous material.

§ 52.1908 Sample unit size.

(a) Compliance with the factors of flavor and odor, color, and character may be determined on: (1) The contents of an entire container, or (2) a representative subsample from containers yielding more than 10 ounces of drained weight.

(b) Compliance with requirements for harmless extraneous material other than plant material is determined on the contents of an entire container.

(c) Compliance with requirements for the factors of stem material, damage, and extraneous plant material shall be determined on subsamples as specified in Table II of this subpart.

TABLE II—SAMPLE UNIT SIZE—DRAINED SPINACH

Style	Containers smaller than No. 2½	No. 2½ containers	No. 10 containers
Whole leaf; cut leaf.	10 ounces	15 ounces	30 ounces.
Chopped	2 ounces	3 ounces	6 ounces.

PRODUCT CHARACTERISTICS

§ 52.1909 Classification of defects.

(a) *General.* Scoreable defects in the factors of color, character, extraneous plant material, other extraneous material, and damaged spinach are outlined in Tables III, IV, and V.

(b) *Extraneous plant material.* Extraneous plant material includes root crowns, root stubs, and seed heads of the spinach plant and harmless grass and weeds of various kinds and texture.

(c) *Other extraneous material.* Other harmless extraneous material includes grit, sand, silt, or other earthy material.

(d) *Damage.* Damage includes discoloration or other similar injury on a leaf or stem or portion thereof which damage affects, materially affects, or seriously affects the appearance or eating quality of the portion of spinach and/or entire product.

(e) *Degrees of defect classes.* Defects are classified as to minor, major, or severe. Each "X" mark in Tables III, IV and V represents "one (1) defect".

TABLE III—WHOLE LEAF; CUT LEAF; CHOPPED STYLES

Quality factors	Defects	Minor	Major	Sever
Color	Color appearance is:			
	Adversely affected to a degree that is noticeable		X	
	Adversely affected to a degree that is objectionable			X
Character	Appearance or eating quality, due to a mushy texture, disintegration, ragged cutting, or shredded leaves and shredded stems or portions thereof, as applicable for the style, is—.			
	Adversely, but not seriously, affected		X	
	Seriously affected			X
Extraneous plant material.				
	Root crown:			
	Any significant portion of the solid area of the plant between the root and attached leaves.		X	
	Root stub:			
	Any portion of the root whether or not leaves are attached			X
	Seed head—Whole Leaf; Cut Leaf Styles:			
	Longer than one (1) inch or objectionable regardless of length		X	
	Seed head—Chopped Style:			
	Pieces affecting appearance or eating quality—			
	More than slightly but not materially	X		
	Materially		X	
	Seriously			X
Other extraneous material.	Grit, sand, silt, or other earthly material:			
	A trace that no more than slightly affects appearance or eating quality.		X	
	Presence materially affects appearance or eating quality			X

TABLE IV

Quality factors	Defects	Minor	Major	Severe
	Whole leaf; cut leaf styles—Grass and weeds (aggregate measurement)			
Extraneous plant material	(1) Green, fine, tender, stringlike blades and stems:			
	3 inches or less	X		
	More than 3 inches but not more than 8 inches		X	
	More than 8 inches			X
	(2) Green and coarse:			
	½ inch or less	X		
	More than ½ inch but not more than 2 inches		X	
	More than 2 inches			X
	(3) Other than green—of any texture or kind:			
	½ inch or less		X	
	More than ½ inch			X
	Chopped style—Grass and weeds (aggregate measurement)			
	(1) Green, fine, tender, stringlike blades and stems:			
	¾ inch or less	X		
	More than ¾ inch but not more than 2 inches		X	
	More than 2 inches			X
	(2) Green and coarse:			
	¾ inch or less		X	
	More than ¾ inch			X
	(3) Other than green—of any texture or kind:			
	Any amount			X

TABLE V

Quality factors	Defects	Minor	Major	Severe
	Whole leaf; cut leaf styles—Discoloration or other injury (affecting the appearance or eating quality)			
Damage	Less than 1 square inch that more than slightly but not materially affects.	X		
	Less than 1 square inch that materially affects		X	
	1 square inch or more but less than 4 square inches that affects to any degree.		X	
	More than 4 square inches that affects to any degree			X
	Chopped style—Discoloration or other injury (affecting the appearance or eating quality)			
	Any area that materially affects	X		

[35 FR 3745, Feb. 26, 1970, as amended at 36 FR 8557, May 8, 1971. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

TOLERANCES FOR GRADE COMPLIANCE

§ 52.1910 Tolerances for stem material.

Stem material is that portion of the spinach plant below the point of attachment to the leaf. Allowances for stem material for the respective grade are shown in Table VI, based on the method for ascertaining the amount of stem material outlined in this subpart (See § 52.1912).

TABLE VI—TOLERANCES FOR STEM MATERIAL (ALL STYLES)

Grade classification	Upper limit (UL) for the sample unit
U.S. Grade A	25 percent by weight
U.S. Grade B	30 percent by weight

§ 52.1911 Tolerances for color, character, damage, harmless extraneous material.

TABLE VII(a)—WHOLE LEAF; CUT LEAF STYLES

For container sizes: Less than No. 2½ (sample unit size—10 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
U.S. Grade A	Severe	1	2	0.25
	Major	4	6	1.50
	Total [1]	8	11	4.0
U.S. Grade B	Severe	2	3	0.50
	Major	8	11	4.0
	Total [1]	18	23	12.0

[1] "Total"—the sum of severe, major, and minor defects.

TABLE VII(b)—WHOLE LEAF; CUT LEAF STYLES

For container size: No. 2½ (sample unit size—15 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
U.S. Grade A	Severe	1	3	0.375
	Major	5	8	2.25
	Total [1]	10	14	6.0
U.S. Grade B	Severe	2	4	0.75
	Major	10	14	6.0
	Total [1]	26	32	18.0

[1] "Total"—the sum of severe, major, and minor defects.

TABLE VII(c)—WHOLE LEAF; CUT LEAF STYLES

For container size: No. 10 (sample unit size—30 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
U.S. Grade A	Severe	2	4	0.75
	Major	8	12	4.5
	Total [1]	18	23	12.0
U.S. Grade B	Severe	4	6	1.5
	Major	18	23	12.0
	Total [1]	47	55	36.0

[1] "Total"—the sum of severe, major, and minor defects.

TABLE VIII(a)—CHOPPED STYLE

For container sizes: Less than No. 2½ (sample unit size—2 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
U.S. Grade A	Severe	1	2	0.25
	Major	4	6	1.50
	Minor (grass and weeds)	4	7	2.00
	Total [1]	22	27	15.0
U.S. Grade B	Severe	2	3	0.5
	Major	8	11	4.0
	Minor (grass and weeds)	10	14	6.0

TABLE VIII(a)—CHOPPED STYLE—Continued

For container sizes: Less than No. 2½ (sample unit size—2 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
	Total [1]	51	59	40.0

[1] "Total"—the sum of severe, major, and minor defects including minor grass and weeds.

TABLE VIII(b)—CHOPPED STYLE

For container size: No. 2½ (sample unit size—3 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
U.S. Grade A	Severe	1	3	0.375
	Major	5	8	2.25
	Minor (grass and weeds)	6	9	3.0
	Total [1]	31	38	22.5
U.S. Grade B	Severe	2	4	0.75
	Major	10	14	6.0
	Minor (grass and weeds)	14	19	9.0
	Total [1]	74	85	60.0

[1] "Total"—the sum of severe, major, and minor defects including minor grass and weeds.

TABLE VIII(c)—CHOPPED STYLE

For container size: No. 10 (sample unit size—6 ozs.)		Number of defects permitted in a sample unit		Sample average value
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	
U.S. Grade A	Severe	2	4	0.75
	Major	8	12	4.5
	Minor (grass and weeds)	10	14	6.0
	Total [1]	57	66	45.0
U.S. Grade B	Severe	4	6	1.50
	Major	18	23	12.0
	Minor (grass and weeds)	26	32	18.0
	Total [1]	140	153	120.0

[1] "Total"—the sum of severe, major, and minor defects including minor grass and weeds.

ASCERTAINING PERCENTAGE OF STEM MATERIAL

§ 52.1912 Method for ascertaining percentage of stem material.

(a) *Method for separation*—(1) *Whole leaf; cut leaf styles.* (i) Have available two dry, previously weighed U.S. Standard No. 8 circular sieves containing 8-meshes to the inch (0.0937, ±3 percent, square openings), not to exceed 8 inches in diameter.

(ii) Place the sample unit of spinach in water in a deep grading tray. With gentle agitation, separate the leaves. Remove the individual leaves from the water and cut the attached stem off just below the last point of attachment of leaf material.

(iii) Place the stem material on one sieve and the leaf material on another sieve. Remove all detached stems and pieces of stem and detached leaves and pieces of leaves from the water and place on their respective screen.

(2) *Chopped style.* Place the sample unit, approximately one ounce at a time, in water in a deep grading tray. Remove the loose stem material and place on a dry sieve as mentioned under (a)(1) of this section. Pour the remaining leaf material on another

sieve. Repeat until the stem material has been removed from the entire sample unit.

(b) *Drained weight of separated material.* (1) Allow the leaf material and stem material to drain for 2 minutes from the time the separation has been completed.

(2) Weigh separately: (i) The screen and leaf material, and (ii) the screen and stem material. The weight of the screen and leaf material minus the weight of the screen is the weight of the leaf material. The weight of the screen and stem material minus the weight of the screen is the weight of stem material.

(c) *Calculations.* The percent of stem material is the weight of drained stem material divided by the sum of the weights of drained stem material and drained leaf material.

Weight of stem material (Weight of stem material) + (weight of leaf material) = Percent of stem material.

LOT ACCEPTANCE

§ 52.1913 Lot acceptance for drained weights.

A lot of canned spinach is considered as meeting the minimum drained weights when the following criteria are met:

(a) The average of the drained weights from all the containers in the sample meets the average drained weight in Table I of this subpart (designated as X_d); and

(b) The number of deviants for drained weight do not exceed the applicable acceptance number specified in the single sampling plan in the Regulations Governing Inspection of Processed Fruits, Vegetables, and Related Products (§§ 52.1 to 52.87).

§ 52.1914 Lot acceptance for quality.

A lot of canned spinach shall be considered as meeting the quality requirements for the applicable grade when the following criteria are met:

(a) *Flavor and odor.* All sample units meet the requirements for flavor and odor.

(b) *Stem material.* (1) The number of sample units which exceed the upper limits (UL) for stem material as applicable for the grade (deviants), specified in Table VI, does not exceed the acceptance number specified for the sample size in the Single Sampling Plan of the Regulations Governing Inspection of Processed Fruits, Vegetables, and Related Products (§§ 52.1 to 52.87).

(2) Deviants for stem material are permitted in addition to the deviants allowed for other quality factors.

(c) *Color, character, damage, harmless extraneous material.* (1) The number of sample units which exceed the upper limit (UL) for these defects for the applicable grade (deviants), specified in Tables VII(a), VII(b), VII(c), VIII(a), VIII(b), and VIII(c), does not exceed the acceptance number specified for the sample size in the Single Sampling Plan of the Regulations Governing Inspection of Processed Fruits, Vegetables, and Related Products (§§ 52.1-52.87); and

(2) The sample average values for the various defect classifications specified in Tables VII(a), VII(b), VII(c), VIII(a), VIII(b), and VIII(c) are not exceeded; and

(3) No sample unit exceeds the maximum number of defects allowed for deviants as specified in Tables VII(a), VII(b), VII(c), VIII(a), VIII(b), and VIII(c).

TALLY SHEET

§ 52.1915 Tally sheet for canned spinach.

No., size, kind of container..........

Label statements..........

Container mark or identification:

Cans..........

Glass..........

Cases..........

Net weight (ounces)..........

Vacuum (inches)..........

Drained weight (ounces) .... Average

Style ....

Quality factors		Defects								
		Sample unit			Sample unit			Sample average value		
		Minor	Major	Severe	Minor	Major	Severe			
Color										
Character										
Damage										
Harmless extraneous material								Minor	Major	Severe
Total (each class)										
Total	Minor									
	Major									
	Severe									
Stem material	A – UL = 30%			%			%			
	B – UL = 25%									
Flavor and odor:										
Good										
Objectionable										

Subpart—United States Standards for Grades of Frozen Cooked Squash

SOURCE: 18 FR 8056, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.1941 Product description.

Frozen cooked squash is the clean, sound, properly matured product made from varieties of fall or late type squash which have been properly prepared by washing, cutting, cleaning, steaming, reducing to a pulp and removing seed, and fiber. The product is then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.1942 Grades of frozen cooked squash.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen cooked squash that possesses a good consistency; that possesses a good color; that possesses a good finish; that is practically free from defects; that possesses a good flavor and odor; and scores not less than 85 points when scored in accordance with the scoring system outlined in this section.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen cooked squash that possesses a reasonably good consistency; that possesses a reasonably good color; that possesses a reasonably good finish; that is reasonably free from defects; that possesses a fairly good flavor and odor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this section.

(c) "Substandard" is the quality of frozen cooked squash that fails to meet the requirements of U.S. Grade B or U.S. Extra Standard.

FACTORS OF QUALITY

§ 52.1943 Ascertaining the grade.

(a) The grade of frozen cooked squash may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of consistency, color, finish, and absence of defects.

(b) The relative importance of each scoring factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Consistency	30
Color	20
Finish	20
Absence of defects	30

Factors	Points
Total score	100

(c) The scores for the factors of consistency, color, finish, and absence of defects are determined after the frozen cooked squash is heated in a double boiler, or in a covered pan until thoroughly warmed and completely free from ice crystals. The warmed product is then stirred to blend all separated liquid into a uniform mixture. The requirements for flavor and odor are also ascertained on the warmed product.

(d) "Good flavor and odor" means that the product after heating, has a good, characteristic normal flavor and odor and is free from objectionable flavors, and objectionable odors of any kind.

(e) "Reasonably good flavor and odor" means that the product, after heating, may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.1944 Ascertaining the ratings for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1945 Consistency.

(a) (*A*) *classification.* Frozen cooked squash that possesses a good consistency may be given a score of 26 to 30 points. "Good consistency" means that the warmed mixed squash, after emptying from a container to a dry flat surface, forms a well-mounded mass, and that at the end of two minutes after emptying on such surface there is not more than a slight separation of free liquor.

(b) (*B*) *classification.* If the frozen cooked squash possesses a reasonably good consistency, a score of 21 to 25 points may be given. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good consistency" means that the warmed mixed squash after emptying from the container to a dry flat surface, may be reasonably stiff, but not excessively stiff; forms a moderately mounded mass, and that at the end of two minutes, after emptying on such surface, there may be a moderate, but not excessive separation of free liquor.

(c) (*SStd*) *classification.* Frozen cooked squash that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1946 Color.

(a) (*A*) *classification.* Frozen cooked squash that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the color of the warmed mixed squash possesses a practically uniform bright, typical color; and is free from discoloration due to oxidation, or other causes.

(b)(*B*) *classification.* If the frozen cooked squash possesses a reasonably good color, a score of 14 to 16 points may be given. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the color of the warmed cooked squash possesses a reasonably uniform, reasonably bright, typical color, and the color may be variable or slightly dull but is not off-color.

(c) (*SStd*) *classification.* Frozen cooked squash that is off-color for any reason or fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1947 Finish.

(a) *General.* The factor of finish refers to the texture of the product and from freedom from hardness of the squash particles.

(b) (*A*) *classification.* Frozen cooked squash that possesses a good finish may be given a score of 17 to 20 points. "Good finish" means that the warmed mixed squash has an even texture, is granular but not lumpy, pasty or "salvy", and the squash particles are not hard.

(c) (*B*) *classification.* If the frozen cooked squash possesses a reasonably good finish, a score of 14 to 16 points may be given. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good finish" means that the warmed mixed squash has an even texture, may lack granular characteristics, may be slightly pasty or slightly "salvy" but not decidedly pasty or decidedly "salvy," and the squash particles are not hard.

(d) (*SStd*) *classification.* Frozen cooked squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1948 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from sand, grit, or silt, pieces of seed, fiber, and from dark or off-colored particles.

(1) "Grit, sand, or silt" means any particle of earthy material.

(b) (*A*) *classification.* Frozen cooked squash that is practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means that no grit, sand, or silt may be present that affects the appearance or eating quality of the frozen cooked squash, and that the number, size and color of the other aforesaid defects present individually or collectively do not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* Frozen cooked squash that is reasonably free from defects may be given a score of 21 to 24 points. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means a trace of grit, sand, or silt may be present that does not materially affect the appearance or eating quality of the frozen cooked squash, and that any of the other aforesaid defects present individually or collectively may be noticeable but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Frozen cooked squash which fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1949 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1950 Score sheet for frozen cooked squash.

Number, size, and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....

Factors		Score points	
Consistency	30	(A)	26-30
		(B)	[1] 21-25
		(SStd.)	[1] 0-20
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Finish	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13

Absence of defects.	30	(A)	25-30
		(B)	[1] 21-24
		(SStd.)	[1] 0-20
Total score	100		
Flavor and odor			
Grade			

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Squash (Summer Type)

SOURCE: 18 FR 8058, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.1961 Product description.

"Frozen squash" is the fresh, sound, immature product from the squash (summer type) plant hereinafter called frozen squash, which has been properly prepared and properly blanched, and is then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.1962 Styles of frozen squash.

(a) Sliced.

(b) Cut.

§ 52.1963 Grades of frozen summer squash.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen squash that possesses similar varietal characteristics, that possesses a good flavor and odor; that possesses a good color; that is practically free from defects; that possesses a good character; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen squash that possesses similar varietal characteristics; that possesses a reasonably good flavor and odor; that possesses a reasonably good color; that is reasonably free from defects; that possesses a reasonably good character; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen squash that fails to meet the requirements of U.S. Grade B or U.S. Extra Standard.

FACTORS OF QUALITY

§ 52.1964 Ascertaining the grade.

(a) The grade of frozen squash may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and character.

(b) The relative importance of each scoring factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Poin
Color	2
Absence of defects	4
Character	4
Total score	10

(c) The scores for the factors of color, absence of defects, and character are determined immediately after thawing so that the product is sufficiently free from ice crystals to permit proper handling as individual units and a representative sample of the product is cooked to ascertain tenderness of the frozen squash before final evaluation of the score for character. Flavor and odor are also ascertained on the cooked product.

(d) "Good flavor and odor" means that the product after cooking has a good, characteristic normal flavor and ordor and is free from objectionable flavors and objectionable odors of any kind.

(e) "Reasonably good flavor and odor" means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.1965 Ascertaining the ratings for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.1966 Color.

(a) (*A*) *classification*. Frozen squash that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the color of the squash is bright and typical of young and tender squash of similar varietal characteristics which has been properly processed.

(b) (*B*) *classification*. If the frozen squash possesses a reasonably good color, a score of 14 to 16 points may be given. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the color of the squash is typical of reasonably young and tender squash of similar varietal characteristics which has been properly processed.

(c) (*SStd*) *classification*. Frozen squash that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1967 Absence of defects.

(a) *General*. The factor of absence of defects refers to the degree of freedom from harmless extraneous vegetable material, sand, grit, or silt, poorly cut units, units damaged by mechanical injury, and units damaged by discoloration, scars, insect injury, or damaged by other means.

(1) "Unit" means a whole squash or a portion of a squash.

(2) "Damaged unit" means any unit damaged by discoloration, scars, insect injury, or by any other means except damaged by mechanical injury to the extent that the appearance or eating quality of the product is materially affected.

(3) "Seriously damaged" means damaged to the extent that the appearance or eating quality of the unit is seriously affected.

(4) "Harmless extraneous vegetable material" means leaves, detached stems or portions thereof, or other similar vegetable material.

(5) "Poorly cut" means units with attached stems or stem material, very ragged units, or pieces of less than ½ slice in sliced style squash.

(6) "Damaged by mechanical injury" means broken or mashed to such an extent that the appearance or eating quality of the unit is seriously affected.

(7) "Sand, grit, or silt" means any particle of earthy material.

(b) (*A*) *classification*. Frozen squash that is practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the product contains no grit, sand, or silt that affects the eating quality or appearance of the frozen squash; that for each 12 ounces of units there may be present not more than one piece of harmless extraneous vegetable material. The combined weight of all other defects and defective units must not exceed 8 percent of the weight of the units: *Provided* That

(1) Not more than 4 percent, by weight, is of damaged units and of such 4 percent not more than one-fourth thereof or 1 percent, by weight, of all the units consist of units that are seriously damaged; or

(2) Not more than 6 percent, by weight, is of poorly cut units, or of units damaged by mechanical injury, or any combination thereof of not more than 6 percent, by weight.

(c) (*B*) *classification*. If the frozen squash is reasonably free from defects, a score of 28 to 33 points may be given. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the product may contain a trace of sand, grit, or silt that does not materially affect the eating quality or appearance of the frozen squash; that for each 12 ounces of units there may be present not more than two pieces of harmless extraneous vegetable material. The combined weight of all other defects and defective units must not exceed 12 percent of the weight of the units: *Provided*, That

(1) Not more than 8 percent, by weight, is of damaged units and of such 8 percent, not more than one-fourth thereof or 2 percent, by weight, of all the units consist of units that are seriously damaged.

(2) Not more than 10 percent, by weight, is of poorly cut units, or of units damaged by mechanical injury, or any combination thereof of not more than 10 percent, by weight.

(d) *(SStd) classification.* Frozen squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1968 Character.

(a) *General.* The factor of character refers to the fleshy texture, the tenderness, and the degree of development of the seeds.

(b) *(A) classification.* Frozen squash that possesses a good character may be given a score of 34 to 40 points. "Good character" means that the units are practically intact, are fleshy and tender, that the seeds are in the immature stage, and that not more than 5 percent, by weight of the units may be of reasonably good character.

(c) *(B) classification.* If the frozen squash possesses a reasonably good character, a score of 28 to 33 points may be given. Frozen squash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the units may show slight disintegration, may have lost to a considerable extent their fleshy texture, may be reasonably tender, and that the seeds may have passed the immature stage of maturity, but are not hard and that not more than 10 percent, by weight, of the units fails to meet the requirements for reasonably good character.

(d) *(SStd) classification.* Frozen squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.1969 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1970 Score sheet for frozen squash (summer type).

Number, size, and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....
Style (sliced, cut) ....

Factors		Score points	
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Absence of defects.	40	(A)	34-40
		(B)	[1] 28-33
		(SStd.)	[1] 0-27
Character	40	(A)	34-40
		(B)	[1] 28-33
		(SStd.)	[1] 0-27
Total score	100		

Flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Strawberries

SOURCE: 20 FR 1580, Mar. 16, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, SIZES, AND GRADES

§ 52.1981 Product description.

Frozen strawberries means the frozen product prepared from sound, properly ripened fresh fruit of the strawberry plant by stemming, proper washing, sorting, and proper draining, may be packed with or without packing medium, and are then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.1982 Styles of frozen strawberries.

(a) "Whole" or "whole strawberries" means frozen strawberries that retain approximately their original conformation.

(b) "Slices" or "sliced strawberries" means frozen strawberries produced by slicing whole strawberries into two or more slices.

§ 52.1983 Sizes of whole frozen strawberries.

Except with respect to U.S. Grade A or U.S. Fancy, the size of the whole frozen strawberry is not incorporated in the grades of the finished product since size, as such, is not a factor of quality for the purpose of these grades. When used in connection with the following sizes of whole frozen strawberries, the term "diameter" means the greatest dimension measured at right angles to a straight line running from the stem to the apex:

(a) "Small size" means whole frozen strawberries that measure less than ⅝ inch in diameter.

(b) "Medium size" means whole frozen strawberries that measure ⅝ inch to 1¼ inches, inclusive, in diameter.

(c) "Large size" means whole frozen strawberries that measure more than 1¼ inches in diameter.

§ 52.1984 Grades of frozen strawberries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen strawberries that possess similar varietal characteristics; that possess a good flavor; that possess a good color; that are practically free from defects; that possess a good character; that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart and that with respect to whole style contain not more than 5 percent, by count, of whole strawberries that are "small size" (less than ⅝ inch in diameter).

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen strawberries that possess similar varietal characteristics; that possess a good flavor; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably good character; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen strawberries that possess similar varietal characteristics; that possess a fairly good flavor; that possess a fairly good color; that are fairly free from defects; that possess a fairly good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen strawberries that fail to meet the requirements of "U.S. Grade C" or "U.S. Standard."

FACTORS OF QUALITY

§ 52.1985 Ascertaining the grade.

(a) *General.* The grade of frozen strawberries is determined immediately after thawing to the extent that the units may be separated easily, and are free from ice crystals. In addition the grade of frozen strawberries is ascertained by considering the factors of quality which are not scored and those which are scored as follows:

(1) *Factors which are not scored.*

(i) Varietal characteristics.

(ii) Flavor and odor.

(iii) Size relative to U.S. Grade A or U.S. Fancy.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Defects	40
Character	20
Total score	100

(b) *Good flavor.* "Good flavor" means that the product has a good characteristic, normal flavor and odor, and is free from objectionable flavors or objectionable odors of any kind.

(c) *Fairly good flavor.* "Fairly good flavor" means that the product may be lacking in good characteristic normal flavor and odor but is free from objectionable flavors or objectionable odors of any kind.

§ 52.1986 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor is inclusive. For example, the range "36 to 40 points" means 36, 37, 38, 39, or 40 points.

§ 52.1987 Color.

(a) (*A*) *classification.* Frozen strawberries that possess a good color may be given a score of 36 to 40 points. "Good color" means that the frozen strawberries as a mass possess a reasonably uniform good characteristic pink to red color which is not more than slightly affected by a dull, gray, or reddish-brown cast; and in addition:

(1) With respect to whole style 85 percent or more, by count, of the strawberries have at least a good characteristic pink to red color over practically the entire surface and of the remainder not more than 5 percent, by count, of all the strawberries may have less than four-fifths of the surface area of a good characteristic pink to red color, or are materially darkened; and that;

(2) With respect to sliced style 85 percent or more, by weight, of the slices have at least a good characteristic pink to red color over practically the entire outer surface (not including cut surfaces) and of the remainder not more than 5 percent, by weight, or all the slices may have less than one-half of the outer surface (not including cut surfaces) of a good characteristic pink to red color, or are materially darkened.

(b) (*B*) *classification.* If the frozen strawberries possess a reasonably good color, a score of 32 to 35 points may be given. Frozen strawberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the frozen strawberries as a mass possess a fairly uniform good characteristic pink to red color which is not materially affected by dull, gray, or reddish-brown cast; and in addition:

(1) With respect to whole style 75 percent or more, by count, of the strawberries have at least a good characteristic pink to red color over practically the entire surface, and of the remainder not more than 10 percent, by count, of all the strawberries may have less than four-fifths of the surface area of a good characteristic pink to red color, or are materially darkened; and that:

(2) With respect to sliced style 75 percent or more, by weight, of the slices have at least a good characteristic pink to red color over practically the entire outer surface (not including cut surfaces) and of the remainder not more than 10 percent, by weight, of all the slices may have less than one-half of the outer surface (not including cut surfaces) of a good characteristic pink to red color, or are materially darkened.

(c) (*C*) *classification.* If the frozen strawberries possess a fairly good color, a score of 28 to 31 points may be given. Frozen strawberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the frozen strawberries as a mass possess a predominant characteristic pink to red color and may show a dull, gray, or slightly dark color, but not to the extent that the appearance or eating quality is seriously affected; and in addition:

(1) With respect to whole style not more than 15 percent, by count, of all

the strawberries may have less than four-fifths of the surface area of a characteristic pink to red color, or are materially darkened.

(2) With respect to sliced style not more than 15 percent, by weight, of all the slices may have less than one-half of the outer surface (not including cut surfaces) of a characteristic pink to red color, or are materially darkened.

(d) (*SStd.*) *classification.* Frozen strawberries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.1988 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from grit, sand, or silt, from harmless extraneous material, caps and portions thereof, sepal-like bracts and portions thereof, stems, short stems, and damaged strawberries.

(1) "Harmless extraneous material" means vegetable substances such as weeds, weed seeds, grass, and leaves and any portions thereof that are harmless.

(2) "Grit, sand, or silt" means any particles of earthy material.

(3) "Short stem" means a stem that is ⅛ inch or less in length and which may include the center portion of a cap to which no sepal-like bract or portion thereof is attached.

(4) "Stem" means a stem, either loose or attached, that is longer than ⅛ inch.

(5) "Cap" means a loose or attached full cap or portion of a cap to which at least one sepal-like bract or a portion thereof is attached. A short stem that is attached to the cap is considered a part of the cap. A stem that is attached to the cap is considered a separate defect.

(6) "Damaged strawberry" means a strawberry or any physically separated portion thereof that is affected by hard seedy or deformed end, and deformed or damaged areas to the extent that the appearance or eating quality is materially affected. Minute, insignificant injuries are not considered as damaged.

(b) (*A*) *classification.* Frozen strawberries that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" has the following meanings with respect to the following styles of frozen strawberries:

(1) *Whole.* No grit, sand, or silt may be present that affects the appearance or eating quality of the product and for each 16 ounces of net weight there may be present an area of not more than ¼ square inch comprising harmless extraneous material such as leaves and portions thereof, caps and portions thereof, and loose sepal-like bracts and portions thereof; not more than two stems, including not more than one stem which may exceed ½ inch in length, or one small piece of harmless extraneous material that is not measurable by area such as weeds, weed seeds, and blades of grass and not more than 16 short stems and there may be present not more than a total of 5 percent, by weight, that are damaged strawberries.

(2) *Sliced.* No grit, sand, or silt may be present that affects the appearance or eating quality of the product, and for each 16 ounces of net weight there may be present an area of not more than ¼ square inch comprising harmless extraneous material such as leaves and portions thereof, caps and portions thereof, and loose sepal-like bracts and portions thereof; not more than two stems, including not more than one stem which may exceed ½ inch in length, or one small piece of harmless extraneous material that is not measurable by area such as weeds, weed seeds and blades of grass; and not more than 16 short stems and there may be present not more than a total of 2½ percent, by weight, that are damaged strawberries.

(c) (*B*) *classification.* If the frozen strawberries are reasonably free from defects, a score of 32 to 35 points may be given. Frozen strawberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" has the following meanings with respect to the following styles of frozen strawberries:

(1) *Whole.* No grit, sand, or silt may be present that affects the appearance or eating quality of the product, and for each 16 ounces of net weight there may be present an area of not more than ½ square inch comprising harmless extraneous material such as leaves and portions thereof, caps and portions thereof, and loose sepal-like bracts and portions thereof; not more than four stems, including not more than one stem which may exceed ½ inch in length, or one small piece of harmless extraneous material that is not measurable by area such as weeds, weed seeds, and blades of grass; and not more than 32 short stems; and there may be present not more than a total of 10 percent, by weight, that are damaged strawberries.

(2) *Sliced.* No grit, sand, or silt may be present that affects the appearance or eating quality of the product, and for each 16 ounces of net weight there may be present an area of not more than ½ square inch comprising harmless extraneous material such as leaves and portions thereof, caps and portions thereof, and loose sepal-like bracts and portions thereof; not more than four stems, including not more than one stem which may exceed ½ inch in length, or one small piece of harmless extraneous material that is not measurable by area such as weeds, weed seeds and blades of grass; and not more than 32 short stems; and there may be present not more than a total of 5 percent, by weight, that are damaged strawberries.

(d) (*C*) *classification.* If the frozen strawberries are fairly free from defects, a score of 28 to 31 points may be given. Frozen strawberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meanings with respect to the following styles of frozen strawberries:

(1) *Whole.* A trace of grit, sand or silt may be present that does not materially affect the appearance or eating quality of the product, and for each 16 ounces of net weight there may be present an area of not more than ¾ square inch comprising harmless extraneous material such as leaves and portions thereof, caps and portions thereof, and loose sepal-like bracts and portions thereof; not more than six stems, including not more than one stem which may exceed ¾ inch in length, or two small pieces of harmless extraneous material that is not measurable by area such as weeds, weed seeds, and blades of grass; and there may be present not more than a total of 12 percent, by weight, that are damaged strawberries.

(2) *Sliced.* A trace of grit, sand, or silt may be present that does not materially affect the appearance or eating quality of the product, and for each 16 ounces of net weight there may be present an area of not more than ¾ square inch comprising harmless extraneous material such as leaves and portions thereof, caps and portions thereof, and loose sepal-like bracts and portions thereof; not more than six stems, including not more than one stem which may exceed ¾ inch in length, or two small pieces of harmless extraneous material that is not measurable by area such as weeds, weed seeds, and blades of grass; and there may be present not more than a total of 6 percent, by weight, that are damaged strawberries.

(e) (*SStd.*) *classification.* Frozen strawberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score of the product (this is a limiting rule).

[20 FR 1580, Mar. 16, 1955, as amended at 23 FR 45, Jan. 3, 1958. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.1989 Character.

(a) *General.* The factor of character refers to firmness, the degree of wholeness, degree of seediness, degree of disintegration as evidenced by partial strawberries and mushy strawberries.

(1) "Partial strawberry" in whole style means that less than three-quarters of the apparent whole strawberry remains intact.

(2) "Mushy strawberries" in whole and sliced styles means strawberries that are so soft they are a pulpy mass or are badly disintegrated.

(b) (*A*) *classification.* Frozen strawberries that possess a good character may be given a score of 18 to 20 points. "Good character" means that the strawberries are reasonably firm, that the appearance and eating quality of the product are not materially affected by disintegration or seediness and that:

(1) With respect to whole style not more than 10 percent, by weight, of strawberries may consist, in the aggregate, of partial strawberries or mushy strawberries or a combination thereof, and that:

(2) With respect to sliced style not more than 20 percent, by weight, of strawberries may consist, in the aggregate, of mushy strawberries.

(c) (*B*) *classification.* If the frozen strawberries have a reasonably good character, a score of 16 or 17 points may be given. Frozen strawberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the strawberries are fairly firm, that the appearance and eating quality of the product are not seriously affected by seediness or disintegration, and that:

(1) With respect to whole style not more than 20 percent, by weight, of strawberries may consist, in the aggregate, of partial strawberries or mushy strawberries or a combination thereof, and that:

(2) With respect to sliced style not more than 30 percent, by weight, of strawberries may consist, in the aggregate, of mushy strawberries.

(d) (*C*) *classification.* If the frozen strawberries have a fairly good character, a score of 14 or 15 points may be given. Frozen strawberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the strawberries are fairly firm, and that:

(1) With respect to whole style not more than 30 percent, by weight, of strawberries may consist, in the aggregate, of partial strawberries or mushy strawberries or a combination thereof, and that:

(2) With respect to sliced style not more than 50 percent, by weight, of strawberries may consist, in the aggregate, of mushy strawberries.

(e) (*SStd.*) *classification.* Frozen strawberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[20 FR 1580, Mar. 16, 1955; 20 FR 2449, Apr. 14, 1955. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

EXPLANATION AND METHOD OF ANALYSIS

§ 52.1990 Definition of terms.

(a) *By weight of strawberries.* "By weight of strawberries" means the strawberry ingredient exclusive of the surrounding medium.

(b) *Area.* "Area" means the aggregate surface covered by the material stated when such material or portions thereof are placed in a contiguous position with no intervening spaces.

§ 52.1991 Explanation of analysis.

(a) "By weight of strawberries" in frozen strawberries is determined by the following method:

(1) *Equipment.*

Flat grading tray.
Table fork.
Two glass beakers.
Torsion or triple beam balance.

(2) *Procedure.* (i) If the sample is of 16 ounces or less use the entire sample, but if the sample is of a size exceeding 16 ounces use a representative 16-ounce aliquot for sliced style and a 32-ounce representative aliquot for whole style.

(ii) Thaw the sample to the extent that the strawberries may be separated easily and are free from ice crystals.

(iii) Place the thawed sample on a flat grading tray, raise one end of the tray approximately one inch so the packing medium drains to the other end of the tray. For a given factor (viz., color defects or character) (*a*) separate those units (or that material) which fall into the categories specified in the standards. (A table fork or similar utensil may be used to facilitate the separation); (*b*) using the table fork remove that portion of the strawberry material which has been separated in paragraph (a)(2)(iii)(*a*) of this section and weight; (*c*) Using the table fork remove the remaining strawberry material exclusive of packing medium from the tray and weight; (*d*) The sum of the weights obtained in paragraph (a)(2)(iii) (*b*) and (*c*) of this section is the weight of strawberry ingredient; and (*e*) Calculate the percent, by weight, of the separated material and divide the weight of such material found in paragraph (a)(2)(iii)(*b*) of this section by the total weight of strawberry material.

LOT INSPECTION AND CERTIFICATION

§ 52.1992 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.1993 Score sheet for frozen strawberries.

Number, size, and kind of container ....
Label: Style or pack: Fruit-sugar ratio (if shown) ....

Container mark or identification	Containers or sample	Average
	Cases	
Net weight (ounces)		
Style		
Size or sizes (whole)		
Under ⅝" (percent by count)		

Factors			Score points
Color	40	(A)	36-40
		(B)	[1] 32-35
		(C)	[1] 28-31
		(SStd.)	0-27
Defects	40	(A)	36-40
		(B)	[1] 32-35
		(C)	[1] 28-31
		(SStd.)	[1] 0-27
Character	20	(A)	18-20
		(B)	[1] 16-17
		(C)	[1] 14-15
		(SStd.)	[1] 0-13
Total score	100		

Flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Succotash

SOURCE: 18 FR 8063, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, INGREDIENTS, AND GRADES

§ 52.2011 Product description.

Frozen succotash means the frozen product prepared from fresh, clean, sound, succulent kernels of sweet corn and the immature seed of varieties of lima beans, vegetable soybeans, or fresh immature pods of green beans or wax beans. The ingredients are mixed and properly drained and then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product. When soybeans or green beans or wax beans are used, the product is designated as "frozen soybean succotash" or "frozen green bean (or wax bean) succotash," as the case may be.

§ 52.2012 Kind, type, and style of ingredients.

(a) Corn, sweet, whole kernel:

(1) White.

(2) Golden (yellow).

(b) Lima beans:

(1) Thin-seeded.

(2) Thick-seeded.

(3) Thick-seeded baby potato.

(c) Soybeans, vegetable.

(d) Green beans or wax beans, Cut or Short Cut style.

§ 52.2013 Proportion of ingredients.

It is recommended that frozen succotash consist of a mixture of the vegetable ingredients in the following proportions.

	Proportions by weight (percent)	
	Not more than—	Not less than—
Corn, white or golden	75	50
Lima beans, fresh	50	25
Soybeans, vegetable	50	25
Green or wax beans	50	25

§ 52.2014 Grades of frozen succotash.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen succotash in which each vegetable possesses similar varietal characteristics; possesses a good flavor and odor; is tender; possesses a good color; is practically free from defects; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the frozen succotash may be reasonably tender and possess a reasonably good color if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen succotash in which each vegetable possesses similar varietal characteristics; possesses a good flavor and odor; is reasonably tender; possesses a reasonably good color; is reasonably free from defects; and that scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen succotash in which each vegetable possesses similar varietal characteristics; possesses a fairly good flavor and odor; is fairly tender; possesses a fairly good color; is fairly free from defects; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen succotash that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FACTORS OF QUALITY

§ 52.2015 Ascertaining the grade.

(a) The grade of frozen succotash is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and tenderness.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	30
Absence of defects	30
Tenderness	40
Total score	100

(c) The scores for the factors of color, absence of defects, and tenderness (with respect to each individual vegetable prior to cooking) are determined immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units. A representative sample is cooked to determine the tenderness of the vegetable ingredients collectively and to ascertain the flavor and odor of the product.

(d) "Good flavor and odor" means that the product, after cooking has a good, characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(e) "Fairly good flavor and odor" means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.2016 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.2017 Color.

(a) *General.* The factor of color refers to the overall appearance of the product and to the general brightness of the vegetables.

(1) "Green" with respect to lima beans means that the color of not less than 50 percent of the surface area of the individual lima bean (with skins on) possesses as much or more green color than plate 18, J-3, as illustrated in Maerz and Paul's Dictionary of Color.[1]

(2) "White" with respect to lima beans means that more than 50 percent of the surface area of the individual lima bean (with skins on) possesses less green color than Plate 18, E-1, as illustrated in Maerz and Paul's Dictionary of Color.[1]

(b) (*A*) *Classification.* Frozen succotash that possesses a good color may be given a score of 27 to 30 points. "Good color" means that the vegetables are bright and possess a color typical of young and tender vegetables that have been properly prepared and properly processed and that the frozen whole kernel (or whole grain) corn is practically free from "off-colored" kernels. In addition, the lima beans shall meet the following color requirements:

(1) Not less than 93 percent, by count, of the lima beans are green and not more than 7 percent, by count, may be lighter in color: *Provided,* That not more than 1 percent, by count, of all the lima beans are white, or

(2) Not less than 97 percent, by count, of the lima beans are green and not more than 3 percent, by count, may be lighter in color or white beans.

(c) (*B*) *Classification.* If the frozen succotash possesses a reasonably good color, a score of 24 to 26 points may be given. "Reasonably good color" means that the vegetables are reasonably bright and possess a color typical of reasonably young and reasonably tender vegetables that have been properly prepared and properly processed and that the frozen whole kernel (or whole grain) corn is reasonably free from "off-colored" kernels. In addition, the lima beans shall meet the following color requirements:

(1) Not less than 65 percent, by count, of the lima beans are green and not more than 35 percent, by count, may be lighter in color or white beans.

(d) (*C*) *Classification.* Frozen succotash that possesses a fairly good color may be given a score of 21 to 23 points. Frozen succotash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the vegetables possess a color that may be dull but not to the extent that the appearance is materially affected and the whole kernel (or whole grain) corn in the frozen succotash is fairly free from "off-variety" kernels. In addition, the lima beans shall meet the following color requirements:

(1) Less than 65 percent, by count, of the lima beans are green and all of the lima beans may be white.

(e) (*SStd*) *Classification.* If the frozen succotash fails to meet the requirements of paragraph (d) of this section, a score of 0 to 20 points may be given. Frozen succotash that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2018 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from extraneous vegetable matter, damaged units, seriously damaged units, and from any other defects.

(1) "Extraneous vegetable matter" means pieces of pod, leaves, stems, pieces of cob, husk, and other similar vegetable matter, other than silk, that is normally removed in proper preparation of the vegetables for processing.

(2) "Damaged" means damaged by discoloration, pathological injury, insect injury, or damaged by other means to the extent that the appearance or eating quality is materially affected.

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[1] First Edition.

(3) "Seriously damaged" means damaged by discoloration, pathological injury, insect injury, or damaged by other means to the extent that the appearance or eating quality is seriously affected and includes but is not limited to "shriveled" lima beans that are materially wrinkled and are not of normal plumpness and "sprouted" lima beans that show an external shoot protruding beyond the cotyledon or skin.

(4) "Other defects" means any defect not specifically mentioned that affects the appearance or eating quality of the product and includes but is not limited to the following:

(i) *Lima beans.* Broken beans, loose cotyledons, loose skins, and any portion thereof.

(ii) *Corn.* Crushed kernels, ragged kernels loose skins and dark and objectionable silk more than ½ inch in length

(iii) *Soybeans.* Broken soybeans, loose cotyledons, loose skins, or any portion thereof.

(iv) *Green (or wax) beans.* Ragged cut units, split units, and small pieces of pod.

(b) (*A*) *classification.* Frozen succotash that is practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the aforesaid defects, individually or collectively, do not more than slightly affect the appearance or eating quality of the product. The following allowances provide a guide for scoring frozen succotash that is practically free from defects: For each 10 ounces of frozen succotash there may be present: 1 piece, or pieces, of extraneous vegetable matter, such as pieces of pod, husk, leaves, and stems having an aggregate area of not more than ³⁄₁₆ square inch (½ inch × ⅜ inch) on one surface of the piece, or pieces; and ¼ cubic centimeter of pieces of cob.

(c) (*B*) *classification.* If the frozen succotash is reasonably free from defects, a score of 24 to 26 points may be given. Frozen succotash that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the aforesaid defects, individually or collectively, do not materially affect the appearance or eating quality of the product. The following allowances provide a guide for scoring frozen succotash that is reasonably free from defects: For each 10 ounces of frozen succotash there may be present: 1 piece, or pieces, of extraneous vegetable matter, such as pieces of pod, husk, leaves, and stems having an aggregate area of not more than ⅜ square inch (½ inch × ¾ inch) on one surface of the piece, or pieces; and ½ cubic centimeter of pieces of cob.

(d) (*C*) *classification.* Frozen succotash that is fairly free from defects may be given a score of 21 to 23 points. Frozen succotash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects means that the aforesaid defects, individually or collectively, do not seriously affect the appearance or eating quality of the product. The following allowances provide a guide for scoring frozen succotash that is fairly free from defects. For each 10 ounces of frozen succotash there may be present: 1 piece, or pieces, of extraneous vegetable matter, such as pieces of pod, husk, leaves, and stems having an aggregate area of not more than ¾ square inch (½ inch × 1½ inch) on one surface of the piece, or pieces; and 1 cubic centimeter of pieces of cob.

(e) (*SStd*) *classification.* Frozen succotash that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points. Frozen succotash that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2019 Tenderness.

(a) (*A*) *classification.* Frozen succotash consisting of vegetables that are tender may be given a score of 36 to 40 points. "Tender" means that the vegetables in the frozen succotash, after cooking, are tender, and, prior to cooking, meet the following additional requirements:

(1) *Corn, whole kernel (or whole grain).* The kernels are in the milk or early cream stage of maturity.

(2) *Lima beans.* The lima beans are young and tender.

(3) *Soybeans.* The soybeans are young and tender.

(4) *Green beans (or wax beans).* The green beans (or wax beans) are full-fleshed for the variety, and the seeds are in the early stage of maturity.

(b) (*B*) *classification.* If the frozen succotash consists of vegetables that are reasonably tender, a score of 32 to 35 points may be given. "Reasonably tender" means that the vegetables in the frozen succotash, after cooking, are reasonably tender, and prior to cooking, meet the following additional requirements:

(1) *Corn, whole kernel.* The kernels are in the cream stage of maturity.

(2) *Lima beans.* The lima beans are reasonably young and reasonably tender.

(3) *Soybeans.* The soybeans are reasonably young and reasonably tender.

(4) *Green beans (or wax beans).* The green beans (or wax beans) may have lost their fleshy texture to some extent and the seeds may have passed the early stage of maturity and have not reached the late stage of maturity.

(c) (*C*) *classification.* Frozen succotash consisting of vegetables that are fairly tender may be given a score of 28 to 31 points. Frozen succotash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly tender" means that the vegetables in the frozen succotash, after cooking, are fairly tender, and, prior to cooking, meet the following additional requirements:

(1) *Corn, whole kernel.* The kernels are in the early dough or dough stage of maturity.

(2) *Lima beans.* The lima beans may be nearly mature.

(3) *Soybeans.* The soybeans may be nearly mature.

(4) *Green beans. (or wax beans).* The green beans (or wax beans) may have lost to a considerable extent their fleshy structure and the seeds may be well developed and nearly mature.

(d) (*SStd*) *classification.* Frozen succotash in which the vegetables fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points. Frozen succotash that fails into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2020 Method for determining proportion of ingredients.

(a) The proportion of ingredients is determined on the thawed succotash in the following manner:

(1) Separate each of the vegetables from all of the containers in the sample.

(2) Composite each of the vegetables thus separated and weigh.

(3) Add the weights of the composited vegetables to obtain the total weight of vegetables in the sample.

(4) Divide the total weight of each of the composited vegetables by the grand total weight of all the vegetables in the sample and multiply by 100. The result shall be considered to be the percentage by weight, of each composited vegetable in the sample.

[18 FR 8063, Dec. 9, 1953, as amended at 24 FR 1677, Mar. 6, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT INSPECTION AND CERTIFICATION

§ 52.2021 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2022 Score sheet for frozen succotash.

Size and kind of container ....

Container mark or identification:

  Packages ....

  Cases ....

Label (list of ingredients, etc) ....

Net weight (ounces) ....

Kind, type, and style of ingredients	Aggregate wt. each ingredient	Proportion of ingredients
Corn—white kernel (white or golden)	oz.	%
Lima beans (type—)	oz.	%
Soybeans	oz.	%
Green (or wax) beans, cut—to—inches	oz.	%
Total weight	oz.	100%
( ) Meets proportions; ( ) Fails proportions		

Factors			Score points
Color	30	(A)	27–30
		(B)	24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Absence of defects.	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Tenderness	40	(A)	36–40
		(B)	32–35
		(C)	[1] 28–31
		(SStd.)	[1] 0–27
Total score	100		

Flavor and odor after cooking:
( ) Good; ( ) fairly good; ( ) off.

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Sweetpotatoes

SOURCE: Sections 52.2041-52.2045 and 52.2050-52.2054 appear at 48 FR 41572, Sept. 16, 1983, unless otherwise noted.

§ 52.2041 Product description.

Canned sweetpotatoes is the product as defined in the Standards of Identity for Certain Other Canned Vegetables (21 CFR 155.200) issued under the Federal Food , Drug, and Cosmetic Act.

§ 52.2042 Varietal color types.

(a) Golden.

(b) Yellow.

(c) Mixed. A combination of golden units and yellow units in a sample unit.

§ 52.2043 Styles.

(a) *Whole* means the canned sweetpotatoes have the appearance of being essentially whole or almost whole in that the units retain the approximate shape of whole sweetpotatoes.

(b) *Halves* or *halved* mean the canned sweetpotatoes have been cut longitudinally into approximate halves.

(c) *Sections* mean the canned sweetpotatoes have been cut transversely into approximately cylindrical units 5 centimeters (2.0 in) or more in length and the diameter of the unit cannot be more than approximately ⅔ of the length.

(d) *Pieces, cuts,* or *cut* mean the canned sweetpotatoes have been randomly cut into portions of varying sizes and shapes.

(e) *Mashed* means the canned sweetpotatoes are wholly comminuted or pureed.

(f) *Whole and pieces* mean canned sweetpotatoes consisting of a combination of whole and pieces with not less than 50 percent of the drained weight being whole sweetpotatoes.

(g) *Mixed* means any combination of two or more of the foregoing styles excluding mashed style.

§ 52.2044 Types of pack.

(a) *Regular pack* means the product is packed in a liquid packing medium and applies to all styles except "mashed" style.

(b) *Vacuum pack* means the product is packed under conditions creating a high vacuum in the container, in the absence of a packing medium, and applies to all styles except "mashed" style.

(c) *Solid pack* means the product is packed in the absence of a packing medium and applies to "mashed" style only.

§ 52.2045 Definitions of terms.

As used in these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Blemishes*—(1) *Insignificant blemished unit* means a unit with slight abnormalities, scars, discolorations, or any other imperfections that affect the appearance slightly but do not affect the edibility of the unit.

(2) *Materially blemished unit* means any sweetpotato unit that has darkened areas (internal or external) or abnormalities including pathological or insect injury that materially affect the appearance or edibility of the unit.

(3) *Seriously blemished unit* means any sweetpotato unit that has darkened areas (internal or external) or abnormalities including pathological or insect injury that seriously affect the appearance or edibility of the unit.

(b) *Character*—(1) *Good character,* in regular pack and vacuum pack, means the sweetpotato units have uniformly smooth texture, are practically free from internal tough or coarse fibers, and may be slightly variable in tenderness but hold their apparent original conformation. In solid-pack, *good character* means the mass has a smooth texture and is practically free from tough or coarse fibers.

(2) *Reasonably good character,* in regular pack and vacuum pack, means the sweetpotato units have a reasonably uniform smooth texture, are substantially free from internal tough or coarse fibers, may be variable in tenderness, and may be firm to soft but hold their apparent original conformation. In solid-pack, *reasonably good character* means the mass has a reasonably smooth texture which may be slightly grainy and is substantially free from tough or coarse fibers.

(3) *Poor character* means the sweetpotatoes fail the requirements for reasonably good character.

(c) *Color*—(1) *Good color* means a bright color typical of either yellow or golden variety sweetpotatoes, but not both. There may be moderate variations of color throughout the sweetpotato unit(s) or mass but not to the extent that the appearance of the product is more than moderately affected.

(2) *Reasonably good color* means that the color is reasonably bright; that both golden and yellow varieties may be present in any amount and there may be considerable variation of color throughout the sweetpotato unit(s) or mass, but not to the extent that the appearance of the product is seriously affected.

(3) *Poor color* means the color fails to meet the requirements for reasonably good color.

(d) *Consistency.* Applies to solid pack only.

(1) *Good consistency* means the sweetpotato mass is sufficiently firm to approximate the general shape of the container with some settling permitted; is not dry, and may show no more than a slight separation of free liquid after 2 minutes.

(2) *Reasonably good consistency* means the sweetpotato mass is sufficiently soft so as not to approximate the general shape of the container, but not free flowing; may be noticeably dry but not hard or rubbery. There may be moderate separation of free liquid after 2 minutes.

(3) *Poor consistency* means the sweetpotato mass fails the requirements for reasonably good consistency.

(e) *Crumbly,* in all styles other than mashed, means sweetpotato units that fall apart readily due to apparent starchiness or dryness.

(f) *Defects*—(1) *Practically free from defects* means the defects present do not materially affect the appearance or edibility of the product.

(2) *Reasonably free from defects* means the defects present do not seriously affect the appearance or edibility of the product.

(g) *Extraneous vegetable material* (EVM) means harmless plant material such as leaves, stems, or roots.

(h) *Firmness*—(1) *Firm* means sweetpotato units that are slightly grainy and possess a somewhat stiff yet yielding texture.

(2) *Very firm* means sweetpotato units that are noticeably grainy or have a hardened texture similar to an uncooked sweetpotato.

(i) *Flavor and odor*—(1) *Good flavor and odor* means distinctive flavor and odor characteristic of properly processed sweetpotatoes (including the packing medium) that are free from objectionable flavors or odors.

(2) *Reasonably good flavor and odor* means that the processed sweetpotatoes (including the packing medium) may be lacking in good flavor and odor but are free from objectionable flavors or objectionable odors.

(3) *Off-flavor and odor* means the processed sweetpotatoes fail the requirements for reasonably good flavor and odor.

(j) *Internal tough or coarse fibers*, in character, mean tough, stringy or fibrous material that is objectionable upon eating.

(k) *Mechanically damaged* means any sweetpotato unit damaged during processing.

(l) *Mushy* means sweetpotato units that have materially or completely disintegrated into small pieces or a pureelike consistency with a pulpy or pasty texture.

(m) *Pathological or insect injury* means damage caused by disease or other similar causes that affects the appearance or edibility of the product.

(n) *Peel* means the outer layer of the sweetpotato that is normally removed during processing.

(o) *Pitted unit* means a sweetpotato unit that has external pock marks to the extent that the appearance of the unit is materially affected.

(p) *Sample unit* size means the amount of product specified to be used in grading. It may be:

(1) The entire contents of a container;

(2) A portion of the contents of a container;

(3) A combination of the contents of 2 or more containers;

(4) A portion of unpacked product.

(q) *Secondary rootlets* mean rootlets 2.5 centimeters (1.0 in) or longer.

(r) *Softness*—(1) *Soft* means sweetpotato units that are tender but not approaching disintegration.

(2) *Very soft* means sweetpotato units that show slight to partial disintegration and are soft and yielding.

(s) *Uniformity of size*—(1) *Practically uniform in size* means, of the 95 percent (by count) most uniform units [disregarding five (5) percent or one (1) unit, whichever is greater], the largest unit does not exceed the weight of the smallest unit by more than a ratio of 3 to 1.

(2) *Reasonably uniform in size* means, of the 95 percent (by count) most uniform units [disregarding five (5) percent or one (1) unit, whichever is greater], the largest unit does not exceed the weight of the smallest unit by more than a ratio of 4 to 1.

(3) *Poor uniformity of size* means the sweetpotato units fail the requirements for reasonably uniform size.

(t) *Untrimmed fibrous ends* mean sweetpotato units that have edible (not tough) external fibers protruding more than 7 millimeters (.28 in).

[48 FR 41572, Sept. 16, 1983; 48 FR 44165, Sept. 28, 1983, as amended at 50 FR 10200, Mar. 14, 1985]

§ 52.2046 Recommended designations of liquid media and Brix measurements.

(a) Brix measurement requirements for liquid media in canned sweetpotatoes are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades.

(b) Brix measurements as referenced in this subpart means the degree of Brix of the liquid media of the equalized product. The recommended designations of liquid packing media and Brix measurements, where applicable, are as follows:

Recommended designation	Brix measurement
Extra heavy sirup	30 degrees or more.
Heavy sirup	25 degrees or more, but less than 30 degrees.
Light sirup	18 degrees or more, but less than 25 degrees.
In water	Not applicable.
Artificially sweetened	Do.

(c) The respective density of the packing media is measured on the refractometer or any other procedure which provides equivalent results, expressed as percent by weight sucrose ("degrees Brix") with correction for temperature to the equivalent of 20 degrees Centigrade (68 degrees Fahrenheit) but without correction for invert sugar or other substances.

(1) The "Brix" measurement may be made on the packing media only if the sweetpotatoes have been canned for 15 or more days and shall be considered as the "degree of Brix" of the liquid media of the equalized product.

(2) Any "Brix" measurement made on a blended homogenized slurry of

the comminuted entire contents of the container shall be considered as the "degree of Brix" of the liquid media of the equalized product.

[41 FR 25988, June 24, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2047 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of canned sweetpotatoes be filled with sweetpotatoes as full as practicable without impairment of quality.

[41 FR 25988, June 24, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2048 Recommended minimum drained weight.

(a) *General.* (1) The drained weight recommendations are given in Table I. They are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on the weight of the sweetpotatoes and other permitted garnish ingredients, if added, after the canned product has been allowed to equalize for 15 or more days after the product has been canned.

(b) *Method for determining drained weight.* (1) The drained weight of canned sweetpotatoes is determined by emptying the sample unit upon a U.S. Standard No. 8 circular sieve (or equivalent) of proper diameter containing 8 meshes to the inch (0.0937-inch, ±3 percent, square openings) so as to distribute the product evenly. Without shifting the product, incline the sieve to a 17 to 20 degree angle to facilitate drainage and allow to drain for two (2) minutes.

(2) The drained weight is the weight of the sieve and sweetpotatoes less the weight of the dry sieve. A sieve 8 inches (20.3 centimeters) in diameter (or approximate equivalent) is used for containers having water capacities of 1.5 kilograms (3.3 pounds) or less, and a sieve 12 inches (30.5 centimeters) in diameter (or approximate equivalent) is used for containers having water capacities greater than 1.5 kilograms (3.3 pounds). The temperature of the packing medium at time of drained weight determination shall be 20° Celsius ±10 degrees (68° Fahrenheit ±18 degrees).

(3) Water capacity of a container means the maximum weight of distilled water at 20° Celsius (68 degrees Fahrenheit) that the sealed container will hold.

(c) *Compliance with recommended minimum drained weights.* Compliance with the recommended minimum weights in Table I is determined by averaging the drained weights from all sample units in the sample which represent a specific lot. Such lot is considered as meeting the recommended minimum drained weight if the following criteria are met:

(1) the sample average (average of all the sample units in the sample) meets the recommended minimum drained weight (designated as "X_d" in Table I); and

(2) the number of sample units which fail to meet the recommended minimum drained weight for individuals (designated as "LL" in Table I) does not exceed the applicable acceptance number (c) specified in the sample plan contained in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Related Products.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED SWEETPOTATOES

[English (avoirdupois) weights]

Container designations	Container dimensions	Regular pack		Vacuum pack	
		LL [1] (ounces)	X_d [2] (ounces)	LL [1] (ounces)	X_d [2] (ounces)
8Z tall	211 × 304	4.9	5.3		
No. 2 squat	307 × 306	7.7	8.4		
No. 303	303 × 406	9.7	10.5		
No. 2	307 × 409	12.1	13.0		
No. 3 squat	404 × 307	13.9	15.0	16.6	17.5
No. 2½	401 × 411	18.0	19.1		
No. 2½ tall	400 × 602	23.5	24.6		
No. 3 cylinder	404 × 700	32.7	33.8		
No. 10	603 × 700	71.2	73.0		

[1] LL=the minimum drained weight for individual sample units.

[2] X_d=the minimum average drained weights from all the sample units in the sample.

TABLE 1A—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED SWEETPOTATOES

[Metric system—Systeme International Units]

Container designations	Container dimensions in millimeters	Regular pack		Vacuum pack	
		LL [1] (grams)	X_d [2] (grams)	LL [1] (grams)	X_d [2] (grams)
8Z tall	68.3 × 82.6	138.9	150.3		
No. 2 squat	87.3 × 85.7	218.3	238.1		
No. 303	81.0 × 111.1	275.0	297.7		
No. 2	87.3 × 115.9	343.0	368.5		
No. 3 squat	108.0 × 87.3	394.1	425.2	470.6	496.1
No. 2½	103.2 × 119.1	510.3	541.5		
No. 2½ tall	101.6 × 155.6	666.2	697.4		
No. 3 cylinder	108.0 × 177.8	927.0	958.2		
No. 10	157.2 × 177.8	2,018.5	2,069.5		

[1] LL=the minimum drained weight for individual sample units.

[2] X_d=the minimum average drained weights from all the sample units in the sample.

[41 FR 25988, June 24, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2049 Recommended fill weights.

(a) *General.* Minimum fill weight recommendations for canned sweetpotatoes are given in Table II. They are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Definitions of terms and symbols.* "Sample unit" for the determination of fill weights means the entire amount of prepared sweetpotatoes and other ingredients, if any, in a container, exclusive of any packing medium, prior to cooking.

"Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the specified minimum lot average fill weight.

LWL_x means the lower warning limit for subgroup averages.

LRL_x means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R′ means specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance" is the amount that the sample quantity may deviate from the lot quantity due solely to the fact that only a portion has been taken from the whole lot.

(c) *Subgroup size.* The subgroup size for the determination of fill weights shall be 5 sample units.

(d) *Sampling frequency*—(1) *Small lots.* For lots consisting of 100 cases or less which require 4 hours or more to pack use the optional fill weight procedure for small lots set forth in § 52.232 of the United States Standards for Determination of Fill Weights.

(2) *Other than small lots.* Draw at least one subgroup per code approximately every 45 minutes.

(e) *Determining fill weights and compliance therewith.* The determination of compliance with the recommended fill weights for canned sweetpotatoes shall be in accordance with the U.S. Standards for Determination of Fill Weights, and U.S. Standards for Inspection by Variables.

TABLE II—RECOMMENDED FILL WEIGHT VALUES FOR CANNED SWEETPOTATOES

[English (avoirdupois) weights]

Fill Weight Values, Ounces

Container size	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	Sampling allowance code
8Z tall	5.3	4.9	4.7	4.6	0.1	0.9	2.0	G.
No. 2 squat	8.0	7.5	7.2	6.8	6.2	1.4	3.0	J.
No. 303	10.3	9.7	9.4	9.0	8.3	1.5	3.2	L.
No. 2	12.7	12.0	11.6	11.1	10.3	1.9	3.9	O.
No. 3 squat	14.7	13.8	13.3	12.7	11.7	2.3	4.9	S.
No. 2½	18.6	17.7	17.2	16.6	15.6	2.3	4.9	S.
No. 2½ Tall	23.8	22.9	22.4	21.8	20.8	2.3	4.9	S.
No. 3 Cylindrical	33.6	32.4	31.8	31.0	29.7	3.0	6.4	V.
No. 10	70.0	66.4	67.6	66.4	64.6	4.2	8.9	A-1.
				Vacuum pack				
No. 3 squat	17.5	16.6	16.1	15.5	14.5	2.3	4.9	S.
				Solid-pack				
No. 303	18.0	17.6	17.4	17.2	16.8	0.9	2.0	G.
No. 3 Cylindrical	53.6	52.9	52.5	52.0	51.2	1.9	3.9	O.
No. 10	109.0	107.7	107.0	106.0	104.5	3.5	7.4	X.

TABLE IIA—RECOMMENDED FILL WEIGHT VALUES FOR CANNED SWEETPOTATOES

[Metric System—Systeme International Units]

Container size	Grams							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8Z tall	150.3	138.9	133.3	130.4	116.2	25.5	56.7	G.
No. 2 squat	226.8	212.6	204.1	192.8	175.8	39.7	85.1	J.
No. 303	292.0	275.0	266.5	255.2	235.3	42.5	90.7	L.
No. 2	360.0	340.2	328.9	314.7	292.0	53.9	110.6	O.
No. 3 squat	416.7	391.2	377.1	360.0	331.7	65.2	138.9	S.
No. 2½	527.3	501.8	487.6	470.6	442.3	65.2	138.9	S.
No. 2½ tall	674.7	649.2	635.0	618.0	589.7	65.2	138.9	S.
No. 3 cylindrical	952.5	918.5	901.5	878.8	842.0	85.1	181.4	V.
No. 10	1,984.5	1,939.1	1,916.4	1,882.4	1,831.4	119.1	252.3	A-1
				Vacuum pack				
No. 3 squat	496.1	470.6	456.4	439.4	411.1	65.2	138.9	S.
				Solid pack				
No. 303	510.3	499.0	493.3	487.6	476.3	25.5	56.7	G.
No. 3 cylindrical	1,519.5	1,499.7	1,488.3	1,474.2	1,451.5	53.9	110.6	O.

TABLE IIA—RECOMMENDED FILL WEIGHT VALUES FOR CANNED SWEETPOTATOES—Continued

[Metric System—Systeme International Units]

Container size	Grams							Sampling allowance code
	X'_{min}	LWL_1	LRL_1	LWL	LRL	R'	R_{max}	
No. 10	3,090.1	3,053.2	3,033.4	3,005.0	2,962.5	98.2	209.8	X.

[41 FR 25988, June 24, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2050 Recommended sample unit size.

The requirements for all factors of quality are based on the following recommended sample unit sizes for the respective styles.

(a) All styles other than mashed—1000 grams (35.3 oz) of drained product or the entire drained contents of a container.

(b) Mashed (Solid-pack)—the entire contents of container.

§ 52.2051 Grades.

(a) *U.S. Grade A* is the quality of canned sweetpotatoes that meets the applicable requirements of Table III or Table IV and scores not less than 90 points.

(b) *U.S. Grade B* is the quality of canned sweetpotatoes that meets the applicable requirements of Table III or Table IV and scores not less than 80 points.

(c) *Substandard* is the quality of canned sweetpotatoes that fails the requirements for *U.S. Grade B.*

§ 52.2052 Factors of quality.

The grade of canned sweetpotatoes is based on the following quality factors:

(a) Color;

(b) Uniformity of size (regular pack and vacuum pack);

(c) Consistency (solid pack);

(d) Defects;

(e) Character;

(f) Flavor and odor.

[48 FR 41572, Sept. 16, 1983, as amended at 50 FR 10200, Mar. 14, 1985]

§ 52.2053 Requirements for grades.

TABLE III—VACUUM PACK; REGULAR PACK

	Grade A	Grade B
Color	Good.	Reasonably good.[1]
Score	27–30 points.	24–26 points.
Uniformity of Size	Practically uniform[2]	Reasonably uniform.[3]
Score	18–20 points	16–17 points.
Defects	Practically free, do not materially affect the appearance or edibility.	Reasonably free,[1] do not seriously affect the appearance or edibility.
Score	27–30 points.	24–26 points.
Flavor and odor	Good[4]	Reasonably good[1]

	Max per sample unit	Max sample average	Max per sample unit	Max sample average
Seriously blemished	5% by count or 1 unit (whichever is greater).	2% by count	10% by count or 2 units (whichever is greater).	4% by count.
Total blemished (materially & seriously	15% by count	8% by count	30% by count	15% by count.
Units with secondary rootlets 2.5 cm or longer	15% by count	5% by count	25% by count	10% by count.
Extraneous Vegetable Material	1 piece	1 piece per 3.4 kg (120 ounces).	2 pieces	2 pieces per 3.4 kg (120 ounces).
Peel per 500 grams	3 cm^2 (.5 in^2)	2 cm^2 (.3 in^2)	6 cm^2 (1 in^2)	4 cm^2 (.6 in^2).
Pitted units	15% by count	5% by count	100% by count	25% by count.

	Max per sample unit	Max sample average	Max per sample unit	Max sample average
Mechanically damaged units	5% by count or 1 unit (whichever is greater).	2% by count	10% by count or 2 units (whichever is greater).	4% by count
Units with untrimmed fibrous ends (edible)	Practically free		Reasonably free	
Character	Good	Good	Reasonably good [1].	Reasonably good.[1]
Score	18–20 points		16–17 points	
Very soft	20% by count or 2 units (whichever is greater).	10% by count	100%	100%.
Very firm, crumbly, mushy, internal tough or coarse fibers.	10% by count or 2 units (whichever is greater).	5% by count	20% by count or 4 units (whichever is greater).	10% by count
Total score	90–100		80–99	

[1] Cannot be graded above U.S. Grade B, regardless of total score. Sample units with quality factors, except uniformity of size, which fail U.S. Grade B, cannot be scored higher than Substandard regardless of the total score.

[2] Can have reasonably uniform size if total score is 90 points or more.

[3] Can have poor uniformity of size if total score is 80 points or more.

[4] Cannot be graded U.S. Grade A, regardless of total score, unless there is good flavor and odor.

TABLE IV—SOLID-PACK

	Grade A	Grade B
Color	Good	Reasonably good.[1]
Score	27–30 points	24–26 points.
Consistency	Good	Reasonably good.[1]
Score	18–20 points	16–17 points.
Defects	Practically free	Reasonably free.[1]
Score	27–30 points	24–26 points.
Character	Good	Reasonably good.[1]
Score	18–20 points	16–17 points.
Flavor and Odor	Good [2]	Reasonably good [1]
Total score	90–100 points	80–89 points.

[1] Cannot be graded above U.S. Grade B, regardless of total score. Sample units with quality factors which fail U.S. Grade B cannot be scored higher than Substandard regardless of the total score.

[2] Cannot be graded U.S. Grade A, regardless of total score, unless there is good flavor and odor.

[48 FR 41572, Sept. 16, 1983; 48 FR 44165, Sept. 28, 1983, as amended at 50 FR 10200, Mar. 14, 1985]

§ 52.2054 Determining the grade of a lot.

The grade of a lot of canned sweetpotatoes covered by these standards is determined by the procedures found in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, and Related Products" (7 CFR 52.1 through 52.83).

Subpart—United States Standards for Grades of Canned Tangerine Juice

SOURCE: 18 FR 8067, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.2071 Product description.

Canned tangerine juice is the undiluted, unconcentrated, unfermented juice obtained from mature fresh fruit of the Mandarin orange (Citrus reticulata) which fruit has been properly washed; is packed with or without the addition of sweetening ingredients; is sufficiently processed by heat to assure preservation of the product; and is packed in containers which are hermetically sealed.

§ 52.2072 Grades of canned tangerine juice.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned tangerine juice that shows no coagulation; that possesses a very good color; is practically free from defects; possesses a very good flavor; and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned tangerine juice that may show slight coagulation that possesses a good color; is fairly free from defects; possesses a good flavor and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade D" or "Substandard" is the quality of canned tangerine juice that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.2073 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that the container be filled as full as practicable with tangerine juice and that the product occupy not less than 90 percent of the total capacity of the container.

FACTORS OF QUALITY

§ 52.2074 Ascertaining the grade.

The grade of canned tangerine juice may be ascertained by considering in addition to the foregoing requirements of the respective grade, the respective ratings for the factors of color, absence of defects, and flavor. The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Color	20
Absence of defects	40
Flavor	40
Total score	100

§ 52.2075 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2076 Color.

(a) (*A*) *classification.* Canned tangerine juice that possesses a very good color may be given a score of 17 to 20 points. "Very good color" means that the tangerine juice possesses a bright yellow to yellow-orange color typical of freshly extracted juice and is free from browning due to scorching, oxidation, caramelization, or other causes.

(b) (*C*) *classification.* If the canned tangerine juice possesses a good color, a score of 14 to 16 points may be given. Canned tangerine juice that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Good color" means that the tangerine juice possesses a typical yellow to yellow-orange color that may be slightly amber or show evidence of slight browning, but is not off-color.

(c) (*SStd*) *classification.* Canned tangerine juice that for any reason fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2077 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from free and suspended pulp, recoverable oil, seeds or seed particles, or other defects.

(1) "Free and suspended pulp" means particles of membrane, core,

skin, and other similar extraneous material in canned tangerine juice.

(b) (*A*) *classification.* Canned tangerine juice that is practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the juice may contain not more than 7 percent free and suspended pulp and that there may be present not more than 0.025 percent by volume of recoverable oil; and does not contain seeds or seed particles or other defects that more than slightly affect the appearance of the product.

(c) (*C*) *classification.* If the canned tangerine juice is fairly free from defects, a score of 28 to 33 points may be given. Canned tangerine juice that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the juice may contain not more than 10 percent free and suspended pulp and that there may be present not more than 0.035 percent by volume of recoverable oil; and does not contain seeds or seed particles or other defects that materially affect the appearance of the product.

(d) (*SStd*) *classification.* If the canned tangerine juice fails to meet the requirements of paragraph (c) of this section, a score of 0 to 27 points may be given. Canned tangerine juice that falls into this classification shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 8067, Dec. 9, 1953, as amended at 33 FR 11884, Aug. 22, 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2078 Flavor.

(a) (*A*) *classification.* (1) Canned tangerine juice that possesses a very good flavor may be given a score of 34 to 40 points. "Very good flavor" means a fine, distinct canned tangerine juice flavor which is free from traces of scorching, caramelization, oxidation, or terpene; is free from off flavors of any kind; and meets the following requirements:

	Minimum	Maximum
Brix (degrees)	10.5	
Acid (per 100 grams)	0.65	1.35
Brix-acid ratio	10.5:1	19:1

(2) Canned tangerine juice is considered "sweet" if the juice possesses a very good flavor and falls within the range of the following requirements:

	Minimum	Maximum
Brix (degrees)	12.5	
Acid (per 100 grams)	0.65	1.35
Brix-acid ratio:		
If less than 16° Brix	11.5:1	19:1
If 16° Brix or more	(1)	19:1

[1] No minimum.

(b) (*C*) *Classification.* (1) If the canned tangerine juice possesses a good flavor, a score of 28 to 33 points may be given. Canned tangerine juice that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Good flavor" means a good, normal canned tangerine juice flavor which may have a slightly caramelized or slightly oxidized flavor but is free from off flavors of any kind and meets the following requirements.

	Minimum	Maximum
Brix (degrees)	10.0	
Acid (per 100 grams)	0.55	1.50
Brix-acid ratio	9.5:1	

(2) Canned tangerine juice is considered "sweet" if the juice possesses a good flavor and falls within the range of the following requirements:

	Minimum	Maximum
Brix (degrees)	12.5	
Acid (per 100 grams)	0.60	1.50
Brix-acid ratio:		
If less than 16° Brix	11.5:1	
If 16° Brix or more	(1)	

[1] No minimum.

(c) (*SStd*) *classification.* Canned tangerine juice that fails to meet the requirements of paragraph (b) of this section, is off flavor, or is unpalatable for any reason may be given a score of

0 to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product (this is a limiting rule).

[18 FR 8067, Dec. 9, 1953, as amended at 34 FR 7861, May 17, 1969. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.2079 Definitions of terms.

(a) "Brix" means the degrees Brix of canned tangerine juice when tested with a Brix hydrometer calibrated at 20 degrees C. (68 degrees F.). If used in testing juice at a temperature other than 20 degrees C. (68 degrees F.) the applicable temperature correction shall be made to the reading of the scale as prescribed in "Official and Tentative Methods of Analysis of the Association of Official Agricultural Chemists." The degrees Brix of canned tangerine juice may be determined by any other method which gives equivalent results.

(b) "Acid" means grams of total acidity calculated an anhydrous citric acid per 100 grams of juice. Total acidity is determined by titration with standard sodium hydroxide solution using phenolphthalein as indicator.

(c) "Brix-acid ratio" is the ratio of the degrees Brix of the canned tangerine juice to the grams of anhydrous citric acid per 100 grams of the juice.

[18 FR 8067, Dec. 9, 1953, as amended at 34 FR 7861, May 17, 1969. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2080 Explanation of analyses.

(a) Free and suspended pulp is determined by the following method:

(1) Graduated centrifuge tubes with a capacity of 50 ml. are filled with canned tangerine juice and placed in a suitable centrifuge. The speed is adjusted according to diameter, as indicated in Table No. I, and the juice is centrifuged for exactly 10 minutes. As used in this section, "diameter" means the over-all distance between the bottoms of opposing centrifuge tubes in operating position. After centrifuging, the milliliter reading at the top of the layer of pulp in the tube is multiplied by 2 to give the percentage of pulp.

TABLE NO. 1

Diameter	Approximate revolutions per minute
10 inches	1,609
10½ inches	1,570
11 inches	1,534
11½ inches	1,500
12 inches	1,468
12½ inches	1,438
13 inches	1,410
13½ inches	1,384
14 inches	1,359
14½ inches	1,336
15 inches	1,313
15½ inches	1,292
16 inches	1,271
16½ inches	1,252
17 inches	1,234
17½ inches	1,216
18 inches	1,199
18½ inches	1,182
19 inches	1,167
19½ inches	1,152
20 inches	1,137

(b) Recoverable oil is determined by the following method:

METHOD

(1) *Reagents.*

Standard bromide-bromate solution—prepared and standardized to 0.099N in accordance with Chapter 42, Standard Solutions in the current edition of the AOAC.[1] For use, add 1 volume of standard solution to 3 volumes of water to make 0.0247N solution. 1 ml. of 0.0247N solution supplies bromine to react with 0.00085g., or 0.0010 ml., of *d*-limonene. The solutions are stable for 6 months.

2-Propanol—Reagent grade ACS (American Chemical Society).

Dilute hydrochloric acid—prepared by adding 1 volume of concentrated acid to 2 volumes of water.

Methyl orange indicator—0.1 percent in water.

(2) *Apparatus.*

Electric heater—with recessed refractory top, 500–750 watts.

Still, all glass—500 ml. distillation flask with 24/40 standard taper neck; 200 mm. Graham condenser with 28/15 receiving socket and drip tip; connecting bulb and adapter as shown in Figure 1.

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[1] "AOAC" refers to the Official Methods of Analysis published by the Association of Official Analytical (formerly Agricultural) Chemists. Copies may be obtained from this Association at Box 540, Benjamin Franklin Station, Washington, D.C. 20044

Burette—10 ml. or 25 ml. graduated to 0.1 ml., with easily controllable flow to permit both rapid and dropwise titration.

(3) *Determination.*

(i) Pipette 25 ml. of well-mixed sample (juice or reconstituted juice) into the distillation flask containing carborundum chips or blass beads, and add 25 ml. of 2-Propanol.

(ii) Distill into a 150 ml. beaker. Continue distilling until solvent ceases to reflux then remove the flask from the heater.

(iii) Add 10 ml. of dilute hydrochloric acid and 1 drop of indicator. (An alternative method would be to prepare a solution containing 5 ml. of indictor and 1,000 ml. of dilute hydrochloric acid—Then add 10 ml. of this acid-indicator mix to the 150 ml. beaker.)

(iv) Titrate with the dilute bromate solution while stirring. The major portion of the titrant may be added rapidly, but the endpoint must be approached at about 1 drop per second. Disappearance of color indicates the endpoint.

(v) Determine the reagent blank by titrating three separate mixtures of 25 ml. 2-Propanol and 10 ml. of dilute hydrochloric acid with indicator—without refilling the burette. Divide the total ml. of titrant used by three to obtain the average blank. Subtract the average blank thus obtained from the ml. of titrant used to titrate the distillate.

(vi) Multiply the remainder by 0.004 to obtain the percent recoverable oil by volume in the juice sample.

[18 FR 8067, Dec. 9, 1953, as amended at 33 FR 11884, Aug. 22, 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

LOT INSPECTION AND CERTIFICATION

§ 52.2081 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2082 Score sheet for canned tangerine juice.

Size and kind of container ....
Container mark or identification..........
Label..........
Liquid measure (fl. ounces)..........
Vacuum (in inches)..........
Brix (degrees)..........
Acid (anhydrous citric: Grams per 100 grams)..........
Brix-acid ratio ....
Pulp (free and suspended: percent) ....
Recoverable oil (percent by volume)..........

Factors			Score points
Color..........	20	(A)	17-20
		(C)	[1]14-16
		(D)	[1]0-13
Absence of defects.	40	(A)	34-40
		(C)	[1]28-33
		(D)	[1]0-27
Flavor..........	40	(A)	34-40
		(C)	[1]28-33
		(D)	[1]0-27
Total score..........	100		

Grade..........

[1] Indicates limiting rule.

[18 FR 8067, Dec. 9, 1953, as amended at 34 FR 7861, May 17, 1969. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Tomato Catsup

SOURCE: 18 FR 8069, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY AND GRADES

§ 52.2101 Identity.

Tomato catsup means the product as defined in the standard of identity for catsup, ketchup, catchup (21 CFR 155.194) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.2102 Grades of tomato catsup.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of tomato catsup that possesses a good color; that possesses a good consistency; that is practically free from defects; that possesses a good flavor; that possesses a good finish; that has a total solids content of not less than 33 percent, by weight;

and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of tomato catsup that possesses a good color; that possesses a good consistency; that is practically free from defects; that possesses a good flavor; that possesses a good finish; that has a total solids content of not less than 29 percent, by weight; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart: *Provided*, That the tomato catsup may score not less than 18 points for the factor of consistency if the total score is not less than 85 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of tomato catsup that possesses a fairly good color; that possesses a fairly good consistency; that is fairly free from defects; that possesses a good finish; that possesses a fairly good flavor; that has a total solids content of not less than 25 percent, by weight; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of tomato catsup that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.2103 Recommended fill of container for tomato catsup.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of tomato catsup be filled as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the capacity of the container.

FACTORS OF QUALITY

§ 52.2104 Ascertaining the grade.

(a) The grade of tomato catsup is ascertained by considering in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, consistency, absence of defects, and flavor. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	25
Consistency	25
Absence of defects	25
Flavor	25
Total score	100

§ 52.2105 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2106 Color.

(a) *General*. The amount of red in the tomato catsup is determined by comparing the color of the product with that produced by spinning a combination of the following Munsell color discs:

Disc 1—Red (5R $2.{}^{6}/_{13}$) (glossy finish).
Disc 2—Yellow (2.5YR ${}^{5}/_{12}$) (glossy finish).
Disc 3—Black (N1) (glossy finish).
Disc 4—Gray (N4) (mat finish).

(b) (*A*) *and* (*B*) *classification*. Tomato catsup that possesses a good color may be given a score of 21 to 25 points. "Good color" means that the color is typical of tomato catsup made from well-ripened red tomatoes and which has been properly prepared and properly processed. Such color contains as much or more red than that produced by spinning the specified Munsell color discs in the following combinations: 65 percent of the area of Disc 1; 21 percent of the area of Disc 2; 14 percent of the area of either Disc 3 or Disc 4, or 7 percent of the area of Disc 3 and 7 percent of the area of Disc 4 whichever most nearly matches the reflectance of the tomato catsup. To receive a score in this classification, tomato catsup, when packed in glass, shall show no discoloration in the "neck" of the bottle.

(c) (*C*) *classification.* If the tomato catsup possesses a fairly good color, a score of 17 to 20 points may be given. Tomato catsup that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the color is typical of tomato catsup and contains as much or more red than that produced by spinning the specified Munsell color discs in the following combinations: 53 percent of the area of Disc 1; 28 percent of the area of Disc 2; 19 percent of the area of either Disc 3 or Disc 4, or 9½ percent of the area of Disc 3 and 9½ percent of the area of Disc 4 whichever most nearly matches the reflectance of the tomato catsup.

(d) (*SStd*) *classification.* Tomato catsup that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 16 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.2107 Consistency.

(a) *General.* The factor of consistency refers to the viscosity of the product and the tendency to hold its liquid portion in suspension.

(b) (*A*) *and* (*B*) *classification.* Tomato catsup that possesses a good consistency may be given a score of 22 to 25 points. "Good consistency" means that the tomato catsup shows not more than a slight separation of free liquid when poured on a flat grading tray; is not excessively stiff; and flows not more than 9 centimeters in 30 seconds at 20 degrees Centigrade in the Bostwick consistometer.

(c) (*C*) *classification.* If the tomato catsup possesses a fairly good consistency, a score of 18 to 21 points may be given. Tomato catsup that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good consistency" means that the tomato catsup may show a noticeable, but not excessive, separation of free liquid when poured on a flat grading tray; is not excessively stiff; and flows not more than 14 centimeters in 30 seconds at 20 degrees Centigrade in the Bostwick consistometer.

(d) (*SStd*) *classification.* Tomato catsup that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2108 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from defects such as: dark specks or scale-like particles, seeds, particles of seed, tomato peel, core material, or other similar substances. This factor is evaluated by observing a layer of the product on a smooth white, flat surface. Such layer is prepared by drawing a scraper with a clearance of 3/32 inch high by 7 inches long rapidly through the product in two horizontal planes so as to form an approximate square.

(b) (*A*) *and* (*B*) *classification.* Tomato catsup that is practically free from defects may be given a score of 21 to 25 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or eating quality of the product.

(c) (*C*) *classification.* If the tomato catsup is fairly free from defects, a score of 18 to 20 points may be given. Tomato catsup that falls into this classification shall not be scored above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present may be noticeable but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Tomato catsup that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.2109 Flavor.

(a) *(A) and (B) classification.* Tomato catsup that possesses a good flavor may be given a score of 21 to 25 points. "Good flavor" means a good, distinct flavor characteristic of good quality ingredients. Such flavor is free from scorching or any objectionable flavor of any kind.

(b) *(C) classification.* If the tomato catsup possesses only a fairly good flavor a score of 17 to 20 points may be given tomato catsup that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means a flavor characteristic of the ingredients in which there may be slight traces of undesirable flavor such as scorched, bitter, or astringent, but is free from objectionable or off flavor of any kind.

(c) *(SStd) classification.* Tomato catsup that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 16 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

DEFINITIONS

§ 52.2110 Definitions of terms used in these standards.

(a) "Total solids" in tomato catsup for the purposes of these standards is the refractometric sucrose value of the filtrate determined in accordance with the International Scale of Refractive Indices of Sucrose Solutions to which value is added 1 percent.

(b) "Good finish" means that the product has a uniform, smooth texture.

LOT INSPECTION AND CERTIFICATION

§ 52.2111 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2112 Score sheet for tomato catsup.

Type of container ....
Container size ....
Container mark ....
Label ....
Net weight or volume ....
Total solids ....
Vacuum readings ....

Factors		Score points	
Color	25	(A–B)	21–25
		(C)	[1] 17–20
		(SStd.)	[1] 0–16
Consistency	25	(A–B)	22–25
		(C)	[1] 18–21
		(SStd.)	[1] 0–17
Absence of defects	25	(A–B)	21–25
		(C)	[1] 18–20
		(SStd.)	[1] 0–17
Flavor	25	(A–B)	21–25
		(C)	[1] 17–20
		(SStd.)	[1] 0–16
Total score	100		

Normal flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Mixed Vegetables

SOURCE: 19 FR 2340, Apr. 22, 1954, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, KINDS, STYLES, PROPORTIONS, AND GRADES

§ 52.2131 Product description.

Frozen mixed vegetables consist of three or more succulent vegetables, properly prepared and properly blanched; may contain vegetables (such as small pieces of sweet red peppers or sweet green peppers) added as garnish; and are frozen and maintained at temperatures necessary for the preservation of the product.

§ 52.2132 Kinds and styles of basic vegetables.

It is recommended that frozen mixed vegetables, other than small pieces of vegetables added as garnish, consist of the following kinds and styles of vegetables as basic vegetables:

(a) Beans, green or wax: Cut styles predominantly of ½ inch to 1½ inch cuts;

(b) Beans, lima: Any single varietal type;

(c) Carrots: Diced style, predominantly of ⅜ inch to ½ inch cubes;

(d) Corn, sweet: Golden (or Yellow) in whole kernel style;

(e) Peas: Early type or sweet type.

§ 52.2133 Recommended proportions of ingredients.

It is recommended that frozen mixed vegetables consist of three, four, or five basic vegetables in the following proportions:

(a) *Three vegetables.* A mixture of three basic vegetables in which any one vegetable is not more than 40 percent by weight of all the frozen mixed vegetables.

(b) *Four vegetables.* A mixture of four basic vegetables in which none of the vegetables is less than 8 percent by weight nor more than 35 percent by weight of all the frozen mixed vegetables.

(c) *Five vegetables.* A mixture of five basic vegetables in which none of the vegetables is less than 8 percent by weight nor more than 30 percent by weight of all the frozen mixed vegetables.

§ 52.2134 Grades of frozen mixed vegetables.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen mixed vegetables in which each basic vegetable possesses similar varietal characteristics; in which all vegetables possess a good color, are practically free from defects, possess a good character, possess a good flavor and odor; and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen mixed vegetables in which each basic vegetable possesses similar varietal characteristics; in which all vegetables possess a reasonably good color, are reasonably free from defects, possess a reasonably good character, possess a good flavor and odor; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen mixed vegetables in which each basic vegetable possesses similar varietal characteristics; in which all vegetables possess a fairly good color, are fairly free from defects, possess a fairly good character, possess a fairly good flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen mixed vegetables that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FACTORS OF QUALITY

§ 52.2135 Ascertaining the grade.

(a) The grade of frozen mixed vegetables is ascertained by considering the factors of similar varietal characteristics and flavor and odor which are not scored and the respective ratings for the factors of color, absence of defects and character which are scored.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Absence of defects	40
Character	40
Total score	100

(c) The scores for the factors of color, absence of defects, and character (with respect to each individual vegetable prior to cooking) are determined immediately after thawing so that the product is sufficiently free from ice crystals to permit proper handling as individual units, and representative samples of the product are cooked to ascertain tenderness of the frozen mixed vegetables, collectively, before final evaluation of the score for character. Flavor and odor are also ascertained on the cooked product

(d) "Good flavor and odor" means that the product and each basic vegetable after cooking has a good, characteristic normal flavor and odor, free from objectionable flavors and objectionable odors of any kind.

(e) "Fairly good flavor and odor" means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.2136 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2137 Color.

(a) *General.* The factor of color refers to the general brightness of all the combined vegetables and to the colors of lima beans, if a component in the mixture, as follows:

(1) "Green" with respect to thin-seeded types (with skins removed), such as Henderson Bush and Thorogreen varieties, and with respect to thick-seeded types (with skins on), such as Fordhook variety, means that the color of not less than 50 percent of the surface area of the individual lima bean possesses as much or more green color as Plate 18, K-5, illustrated in the First Edition of Maerz and Paul's Dictionary of Color.

(2) "Green" with respect to thick-seeded Baby Potato type (with skins on), such as Baby Potato, Baby Fordhook, and Evergreen varieties, means that the color of not less than 50 percent of the surface area of the individual lima bean possesses as much or more green color as Plate 18, J-3, illustrated in the First Edition of Maerz and Paul's Dictionary of Color.

(3) "White" for the respective varietal types (with skins removed or with skins on, as the case may be) means that more than 50 percent of the surface area of the individual lima bean possesses less green color than Plate 18, E-1, as illustrated in the First Edition of Maerz and Paul's Dictionary of Color.

(b) (*A*) *classification.* Frozen mixed vegetables which possess a good color may be given a score of 18 to 20 points "Good color" means that the combined basic vegetables as a mass and the individual basic vegetables are bright and characteristic of young or tender vegetables that have been properly prepared and properly processed; that any pieces of vegetable material used for garnish are reasonably bright; and that lima beans, if present, possess a bright typical color for the varietal type and meet the following additional color requirements for the respective types:

(1) *Thin-seeded type* (*with skins removed*): *Thick-seeded Baby Potato type* (*with skins on*). 90 percent or more, by count, of all the lima beans are "green"; and the balance may be lighter in color or may be white or combinations thereof.

(2) *Thick-seeded type* (*with skins on*). 85 percent or more, by count, of all the lima beans are "green"; and the balance may be lighter in color but not more than 5 percent, by count, of all the lima beans may be white.

(c) (*B*) *classification.* If the frozen mixed vegetables possess a reasonably good color, a score of 16 or 17 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the combined basic vegetables as a mass and the individual basic vegetables are reasonably bright and characteristic of reasonably young or reasonably tender mixed vegetables that have been properly prepared and properly processed; that any pieces of vegetable material used for garnish may be only fairly bright but are not off color for any reason; and that lima beans, if present, possess a reasonably bright typical color for the varietal type and meet the following additional color requirements for the respective types:

(1) *Thin-seeded type (with skins removed): Thick-seeded Baby Potato type (with skins on).* 65 percent or more, by count, of all the lima beans are "green"; and the balance may be lighter in color or may be white or combinations thereof.

(2) *Thick-seeded type (with skins on).* 60 percent or more, by count, of all the lima beans are "green": and the balance may be lighter in color but not more than 5 percent, by count, of all the lima beans may be white.

(d) *(C) classification.* If the frozen mixed vegetables possess a fairly good color, a score of 14 or 15 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the combined basic vegetables as a mass and the individual basic vegetables are fairly bright and characteristic of mixed vegetables that have been properly prepared and properly processed; that any pieces of vegetable material used for garnish may be only fairly bright but are not off color for any reason; and that lima beans, if present, possess a fairly bright typical color for the varietal type and meet the following additional color requirements for the respective types:

(1) *Thin seeded type (with skins removed): Thick-seeded Baby Potato type (with skins on).* More than 35 percent by count, of all the lima beans are lighter than "green" including lima beans that may be white.

(2) *Thick-seeded type (with skins on.* More than 40 percent, by count, of all the beans are lighter than "green" but no more than 20 percent, by count, of all the lima beans may be white.

(e) *(SStd) classification.* If the frozen mixed vegetables fail to meet the requirements of paragraph (d) of this section, a score of 0 to 13 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2138 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous vegetable materials, slightly damaged units, moderately damaged units, seriously damaged units, and any other defects which detract from the appearance or edibility of the product.

(1) "Harmless extraneous vegetable material" means any vegetable substance other than from any of the basic vegetables or garnish and any portions of the basic vegetables which are normally removed in preparation for processing. Such materials include, but are not limited to, "small pieces" and "large pieces" as follows:

(i) A "small piece of harmless extraneous vegetable material" is any piece or unit of such material similar in shape and the equivalent in size or smaller than 3/16 square inch of leafy material or loose pieces of pods from peas or lima beans, tough or woody stems of any size other than unstemmed units of green or wax beans, ¼-inch cube of corn cob material, ½ square inch of corn husk, and ⅜-inch diameter thistle buds;

(ii) A "large piece of harmless extraneous vegetable material" is any piece or unit of such material similar in shape and larger in size than the equivalent of an applicable kind of "small piece of harmless extraneous vegetable material."

(2) "Slightly damaged unit" means any unit of the basic vegetable or garnish that is affected by slight blemishes, slight discoloration, or similar injury that are noticeable but do not materially affect the appearance or edibility of the unit, and includes, but is not limited to, light discoloration of the hilum of lima beans or other light discoloration of the skin which does not penetrate into the cotyledon of lima beans.

(3) "Moderately damaged unit" means any unit of a basic vegetable or garnish that is affected by blemishes, discoloration, or any other similar injury that materially affects the appearance or edibility of the unit and has the following specific meanings for the respective vegetables:

(i) *Beans, green or wax.* Any unit blemished by discoloration or by other means which in the aggregate exceeds the area of a circle ⅛ inch in diameter.

(ii) *Beans, lima.* A bean or portion thereof that is spotted or otherwise definitely discolored or that is blemished by means other than light discoloration.

(iii) *Carrots.* Any unit possessing an unpeeled area greater than the area of a circle ⅛ inch in diameter; and any unit blemished by internal or external discoloration, by sunburn or green color, or by other means.

(iv) *Corn.* Any kernel or portion thereof that possesses serious brown or black discoloration.

(v) *Peas.* Any spotted pea or any off-colored pea (such as brown, gray, cream, or yellow-white) that is abnormally defective and that definitely lacks any tinge of green color.

(vi) *Garnish.* Any piece blemished by discoloration or by other means which in the aggregate exceeds the area of a circle ⅛ inch in diameter.

(4) "Seriously damaged unit" means any unit of the basic vegetable or garnish, other than damaged corn kernels, that is damaged to the extent that the appearance and edibility of the unit is seriously affected and includes, but is not limited to, "shriveled" lima beans that are materially wrinkled and not of normal plumpness; "sprouted" lima beans that show an external shoot protruding beyond the cotyledon and skin; and any unit with brown or very black or very dark spots and similar injury regardless of the area affected.

(5) "Other defects" means any defects not specifically mentioned that affect the appearance or edibility of the product and include, but are not limited to the following:

(i) *Beans, green or wax.* Loose seeds and portions thereof; and pod sections with very ragged edges, that are partially broken or split, or that are markedly shorter or longer than the predominating lengths of the cut units;

(ii) *Beans, lima.* Mashed beans, broken beans, loose cotyledons, loose skins, and any portions thereof;

(iii) *Carrots.* Crushed, broken, cracked, or irregularly shaped units; units with excessively frayed edges and surfaces; and units markedly smaller than one-half the volume of, or markedly larger than the predominating size of cubes;

(iv) *Corn.* Crushed kernels, ragged kernels, loose skins, and dark and objectionable pieces of silk more than ½ inch in length; and

(v) *Peas.* Mashed peas, broken peas, loose cotyledons, loose skins, and any portions thereof.

(b) (*A*) *classification.* Frozen mixed vegetables that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that there may be present no more than the following defects within the limits stated:

(1) No large pieces of harmless extraneous vegetable material, but 1 small piece of harmless extraneous vegetable material for each 16 ounces net weight, or for each package if the package is less than 16 ounces, of frozen mixed vegetables: *Provided,* That the combined weight of all the harmless extraneous material is not more than ½ of 1 percent, by weight, of the frozen mixed vegetables;

(2) A total of 3 moderately damaged units and seriously damaged units for each 3 ounces of frozen mixed vegetables of which 1 unit for each 4 ounces of frozen mixed vegetables may be seriously damaged: *Provided,* That slightly damaged, moderately damaged, and seriously damaged units, either singly or in combination, do not affect materially the appearance or edibility of the frozen mixed vegetables; and

(3) Other defects, individually or collectively, do not affect more than slightly the appearance of the frozen mixed vegetables.

(c) (*B*) *classification.* If the frozen mixed vegetables are reasonably free from defects, a score of 32 to 35 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present no more than the following defects within the limits stated:

(1) 1 large piece of harmless extraneous vegetable material and 2 small pieces of harmless extraneous vegetable material for each 16 ounces net

weight, or for each package if the package is less than 16 ounces, of frozen mixed vegetables: *Provided,* That the combined weight of all the harmless extraneous material is not more than ½ of 1 percent, by weight, of the frozen mixed vegetables;

(2) A total of 4 moderately damaged units and seriously damaged units for each 3 ounces of frozen mixed vegetables of which 1 unit for each 3 ounces of frozen mixed vegetables may be seriously damaged: *Provided,* That slightly damaged, moderately damaged, and seriously damaged units, either singly or in combination. do not affect materially the appearance or edibility of the frozen mixed vegetables; and

(3) Other defects, individually or collectively, do not affect materially the appearance of the frozen mixed vegetables.

(d) (*C*) *classification.* If the frozen mixed vegetables are fairly free from defects, a score of 28 to 31 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that there may be present no more than the following defects within the limits stated:

(1) 1 large piece of harmless extraneous vegetable material and 2 small pieces of harmless extraneous vegetable material for each 16 ounces net weight, or for each package if the package is less than 16 ounces, of frozen mixed vegetables: *Provided,* That the combined weight of all the harmless extraneous material is not more than ½ of 1 percent, by weight, of the frozen mixed vegetables;

(2) A total of 5 moderately damaged units and seriously damaged units for each 3 ounces of frozen mixed vegetables of which 1 unit for each 2 ounces of frozen mixed vegetables may be seriously damaged: *Provided,* That slightly damaged, moderately damaged, and seriously damaged units; either singly or in combination, do not seriously affect the appearance or edibility of the frozen mixed vegetables; and

(3) Other defects, individually or collectively, do not seriously affect the appearance of the frozen mixed vegetables.

(e) (*SStd*) *classification.* If the frozen mixed vegetables fail to meet the requirements of paragraph (d) of this section, a score of 0 to 27 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2139 Character.

(a) *General.* The factor of character refers to the texture, the maturity, and the degree of development of the pods and seeds in green beans or wax beans; the tenderness of lima beans; the tenderness and the degree of freedom from stringy or coarse fibers in carrots; the tenderness and maturity or starchiness of the corn; the tenderness or maturity of the peas; and to the tenderness of the combined frozen mixed vegetables after cooking.

(b) *Interpretation of terms.* Unless indicated otherwise, the interpretation of the terms with respect to tenderness, texture, maturity, and development of the individual vegetables prior to cooking are the same as those in the applicable United States Standards for Grades of the frozen product.

(c) (*A*) *classification.* Frozen mixed vegetables which collectively and individually possess a good character may be given a score of 36 to 40 points. "Good character" means that the combined vegetables after cooking are tender and that the individual vegetables prior to cooking meet the following requirements:

(1) *Beans, green or wax.* The bean pods and seeds possess a good character.

(2) *Beans, lima.* The lima beans, exclusive of white beans, are tender; and any white beans that may be present are tender or reasonably tender.

(3) *Carrots.* The units possess a tender texture.

(4) *Corn.* The kernels are no more advanced than the cream stage of maturity, have a reasonably tender texture, and are the equivalent of frozen whole-grain corn that would score not

less than 43 points for the factor of "Tenderness and Maturity" as outlined in the "United States Standards for Grades of Frozen Whole Kernel (or Whole Grain) Corn."

(5) *Peas.* The peas are reasonably tender and are the equivalent of frozen peas that would score not less than 34 points for the factor of "Tenderness and Maturity" as outlined in the "United States Standards for Grades of Frozen Peas."

(d) (*B*) *classification.* If the frozen mixed vegetables, collectively and individually, possess a reasonably good character, a score of 32 to 35 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the combined vegetables after cooking are reasonably tender and practically free from tough fibers and that the individual vegetables prior to cooking meet the following requirements:

(1) *Beans, green or wax.* The bean pods and seeds possess a reasonably good character.

(2) *Beans, lima.* The lima beans, including white beans that may be present, are reasonably tender.

(3) *Carrots.* The units possess a tender texture.

(4) *Corn.* The kernels are reasonably tender and are the equivalent of frozen whole-grain corn that would score not less than 40 points for the factor of "Tenderness and Maturity" as outlined in the "United States Standards for Grades of Frozen Whole Kernel (or Whole Grain) Corn."

(5) *Peas.* The peas are reasonably tender and are the equivalent of frozen peas that would score not less than 32 points for the factor of "Tenderness and Maturity" as outlined in the "United States Standards for Grades of Frozen Peas."

(e) (*C*) *classification.* If the frozen mixed vegetables, collectively and individually, possess a fairly good character, a score of 28 to 31 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the combined vegetables after cooking are fairly tender and reasonably free from tough fibers and that the individual vegetables prior to cooking meet the following requirements:

(1) *Beans, green or wax.* The bean pods and seeds possess a fairly good character.

(2) *Beans, lima.* The lima beans, including white beans that may be present, are fairly tender.

(3) *Carrots.* The units possess a reasonably tender texture.

(4) *Corn.* The kernels are fairly tender.

(5) *Peas.* The peas are fairly tender.

(f) (*SStd*) *classification.* If the frozen mixed vegetables, collectively or individually, fail to meet the requirements of paragraph (e) of this section, a score of 0 to 27 points may be given. Frozen mixed vegetables that fall into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.2140 Explanation of terms and analyses.

(a) The "proportion of ingredients" are determined on the thawed vegetables by the following procedure:

(1) Separate and assemble from all the containers in the sample each of the basic vegetables;

(2) Weigh each basic vegetable thus composited to obtain the "aggregate weight" of each basic vegetable from all the containers in the sample;

(3) Add the aggregate weights of all the basic vegetables to obtain the "grand total weight" of all the basic vegetables from all containers in the sample; and then

(4) Calculate the percentage of each basic vegetable in the sample by dividing the "aggregate weight" of each basic vegetable by the "grand total weight" of all the basic vegetables.

LOT INSPECTION AND CERTIFICATION

§ 52.2141 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2142 Score sheet for frozen mixed vegetables.

Size and kind of container ....
Container mark or identification:
  Packages ....
  Cases ....
Label (list of ingredients, etc.) ....
Net weight (ounces) ....

Kinds, styles of ingredients	Aggregate wt. each ingredient	Proportion of ingredients
Garnish.		
Beans—Cut: ( ) green; ( ) wax	oz.	%
(—"to—") ( ) round; ( ) flat		
Lima beans	oz.	%
Carrots: Diced (approx. —") cubes	oz.	%
Corn: Whole kernel—golden	oz.	%
Peas: ( ) sweet; ( ) early	oz.	%
Grand total weight	oz.	100%
( ) Meets proportions; ( ) fails proportions		

Factors		Score points	
Color	20	(A)	18-20
		(B)	[1]16-17
		(C)	[1]14-15
		(SStd)	[1]0-13
Absence of defects.	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(SStd)	[1]0-27
Character	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(SStd)	[1]0-27

All vegetables after cooking:
( ) Tender; ( ) reasonably tender; ( ) fairly tender.
Flavor and odor (after cooking).
( ) Good; ( ) fairly good: ( ) off

Total score ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Apples

SOURCE: 18 FR 8073, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2161 Product description.

Canned apples is the product prepared from sound, fresh apples of proper maturity and proper ripeness, which fruit is packed with or without any of the following ingredients: Water, salt, spices, nutritive sweetening ingredients, and any other ingredients permissible under the provision of the Federal Food, Drug and Cosmetic Act, and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

§ 52.2162 Styles of canned apples.

"Sliced" means canned apples consisting of segments of apples cut longitudinally and radially from the core axis.

§ 52.2163 Grades of canned apples.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned apples that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a good color; that are practically uniform in size; that are practically free from defects; that possess a good character; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart: *Provided*, That the canned apples may be fairly uniform in size. If the total score is not less than 85 points.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned apples that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a fairly good color; that are fairly uniform in size; that are fairly free from defects; that possess a fairly good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned apples that fail to meet the requirements of "U.S. Grade C" or "U.S. Standard."

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.2164 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled with apples as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.2165 Recommended minimum drained weights.

(a) Minimum drained weight recommendations for canned apples shown in Table I of this paragrapn are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades. The drained weight of canned apples is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-inch, ±3% square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes. The drained weight is the weight of the sieve and the apples less the weight of the dry sieve. A sieve of 8 inches in diameter is used for No. 3 size cans (404 × 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the No. 3 size can.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS

Can size	Can dimensions (in inches)		Drained weight (in ounces)
	Diameter	Weight	
No. 303	$3\frac{3}{16}$	$4\frac{7}{16}$	14
No. 2	$3\frac{7}{16}$	$4\frac{9}{16}$	18
No. 2½	$4\frac{1}{16}$	$4\frac{11}{16}$	26
No. 10	$6\frac{3}{16}$	7	96

(b) Compliance with the recommended drained weights for canned apples is determined by averaging the drained weights from all the containers which are representative of a specific lot and such lot is considered as meeting the recommendation if:

(1) The average drained weight from all the containers meets the recommended drained weight;

(2) One half—or more of the containers meet the recommended drained weight; and

(3) The drained weights from the containers which do not meet the recommended drained weights are within the range of variability for good commercial practice.

FACTORS OF QUALITY

§ 52.2166 Ascertaining the grade.

(a) The grade of canned apples is ascertained by considering the requirements with respect to varietal characteristics, flavor, and odor, which are not scored and the factors of color, uniformity of size, absence of defects, and character which are scored.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size	20
Absence of defects	20
Character	40
Total score	100

(c) "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.2167 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2168 Color.

(a) (*A*) *classification.* Canned apples that possess a good color may be given a score of 17 to 20 points. "Good color" means that the slices, internally and externally, possess a reasonably uniform bright color, characteristic of apples of similar varieties.

(b) (*C*) *classification.* If the canned apples possess a fairly good color, a score of 14 to 16 points may be given. Canned apples that fall into this classification shall not be graded above U.S. Grade C or U.S. Standards, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the slices possess a color characteristic of apples of similar varieties; may vary noticeably in color; may possess a slight, but not markedly, brown, pink, or grey cast; and are practically free from internal discoloration.

(c) (*SStd*) *classification.* Canned apples that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2169 Uniformity of size.

(a) *General.* The factor of uniformity of size refers to the degree of wholeness and to the uniformity of thickness of the slices.

(1) "Practically whole slice" means that the individual slice may be cut or broken but at least three-fourths of the apparent original slice remains.

(b) (*A*) *classification.* Canned apples that are practically uniform in size may be given a score of 17 to 20 points. "Practically uniform in size" means that at least 90 percent of the drained weight of the product consists of whole or practically whole slices of 1¼ inches in length or longer; and that of the 90 percent of the drained weight of the product consisting of units of the most uniform thickness, the thickness of the slices does not vary more than ¼ inch.

(c) (*C*) *classification.* Canned apples that are fairly uniform in size may be given a score of 14 to 16 points. "Fairly uniform in size" means that at least 75 percent of the drained weight of the product consists of whole or practically whole slices of 1¼ inches in length or longer.

(d) (*SStd*) *classification.* Canned apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2170 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous matter, from damaged or seriously damaged slices, and from carpel tissue.

(1) "Harmless extraneous matter" means any vegetable substance (including, but not being limited to, a leaf, stem, or portions thereof, cores and portions of cores, and seeds) that is harmless.

(2) "Damaged unit" means any unit possessing green peel that exceeds in the aggregate an area of a circle ¼ inch in diameter, or red peel that exceeds in the aggregate an area of a circle ¼ inch in diameter, light brown bruise that exceeds the area of a circle ½ inch in diameter or which is more than ¼ inch deep, and any unit in which the appearance or eating quality is materially affected by blossom end material, dark brown bruise or other internal, or external discoloration, pathological injury, insect injury, or by any other means.

(3) "Seriously damaged unit" means any unit damaged to such an extent that the appearance or eating quality is seriously affected.

(4) "Practically free from carpel tissue" means that for each 16 ounces of the product, the carpel tissue pres-

ent does not exceed in the aggregate an area equal to ¾ square inch.

(5) "Fairly free from carpel tissue" means that for each 16 ounces of the product the carpel tissue present does not exceed an area equal to 1½ square inches.

(b) (*A*) *classification.* Canned apples that are practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that extraneous matter may be present that does not materially affect the appearance or eating quality of the product; that the product is practically free from carpel tissue; and that not more than a total of 5 percent, by weight, of the units may be damaged of which not more than 1 percent, by weight, of all the units may be seriously damaged: *Provided,* That extraneous matter, damaged and seriously damaged units, singly or in combination, do not materially affect the appearance or eating quality of the product.

(c) (*C*) *classification.* Canned apples that are fairly free from defects may be given a score of 14 to 16 points. Canned applies that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that extraneous matter may be present that does not seriously affect the appearance or eating quality of the product; that the product is fairly free from carpel tissue; and that not more than a total of 15 percent, by weight, of the units may be damaged of which not more than 3 percent, by weight, of all the units may be seriously damaged: *Provided,* That extraneous matter, damaged and seriously damaged units, singly or in combination, do not seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Canned apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2171 Character.

(a) *General.* The factor of character refers to the texture of the slices and to the tendency to retain their conformation without material softening or disintegration.

(1) "Mushy apples" means slices or portions thereof that are a pulpy mass and of a consistency approximating applesauce.

(b) (*A*) *classification.* Canned apples that possess a good character may be given a score of 34 to 40 points. "Good character" means that the slices possess a reasonably tender texture, and that not more than 5 percent of the drained weight of the product consists of mushy apples.

(c) (*C*) *classification.* Canned apples that possess a fairly good character may be given a score of 28 to 33 points. Canned apples that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the slices may be variable in texture, with not more than 15 percent of the drained weight of the product consisting of slices that are markedly hard, markedly soft, or mushy.

(d) (*SStd*) *classification.* Canned apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2172 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2173 Score sheet for canned apples.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum readings (in inches) ....
Drained weight (ounces) ....

Factors		Score points	
I. Color	20	(A)	17-20
		(C)	[1] 14-16
		(SStd)	[1] 0-13
II. Uniformity of size.	20	(A)	17-20
		(C)	14-16
		(SStd)	[1] 0-13
III. Absence of defects.	20	(A)	17-20
		(C)	[1] 14-16
		(SStd)	[1] 0-13
IV. Character of fruit.	40	(A)	34-40
		(C)	[1] 28-33
		(SStd)	[1] 0-27
Total score	100		

Normal flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Chili Sauce

SOURCE: 18 FR 8075, Dec. 9, 1953, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.2191 Product description.

Chili sauce is the product prepared from mature, clean, sound, tomatoes of the red or reddish varieties which are peeled and chopped or crushed, or all (or a portion) of the tomatoes may be chopped, crushed, or macerated and the peelings screened out in a manner so that at least a substantial portion of the seed remains in the product, to which are added salt, spices, vinegar, nutritive sweetening ingredients, and to which may be added vegetable flavoring ingredients such as chopped onion, chopped green or red pepper, chopped green tomatoes, chopped celery, and sweet pickle relish in such quantities as will not materially alter the appearance of the product with respect to the predominance of the tomato ingredient, and any other ingredients permissible under the provisons of the Federal Food, Drug, and Cosmetic Act. The chili sauce is processed in accordance with good commercial practice; is packed in hermetically sealed containers; and is sufficiently processed by heat, before or after sealing, to assure preservation of the product. The refractive index of the filtrate of the chili sauce at 20 degrees C. is not less than 1.3784.

§ 52.2192 Grades of chili sauce.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of chili sauce that possesses a good color; that possesses a good consistency; that possesses a good character; that is practically free from defects; that possesses a good flavor; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart: *Provided*, That the chili sauce may score not less than 14 points on the factor of character if the total score is not less than 85 points.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of chili sauce that possesses a fairly good color; that possesses a fairly good consistency; that possesses a fairly good character; that is fairly free from defects; that possesses a fairly good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of chili sauce that fails to meet the requirements of "U.S. Grade C" or "U.S. Standard."

FILL OF CONTAINER

§ 52.2193 Recommended fill of container for chili sauce.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of chili sauce be filled as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the capacity of the container.

FACTORS OF QUALITY

§ 52.2194 Ascertaining the grade.

(a) The grade of the chili sauce is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors of color, consistency, character, absence of defects, and flavor. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given for each such factor is:

Factors	Points
Color	20
Consistency	20
Character	20
Absence of defects	20
Flavor	20
Total score	100

§ 52.2195 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, and 20 points).

§ 52.2196 Color.

(a) (*A*) *classification.* Chili sauce that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the color of the chili sauce is bright; the color of the tomato ingredient is predominant and characteristic of properly prepared, well ripened properly processed tomatoes; and that the added seasoning ingredients do not materially detract from the appearance of the product.

(b) (*C*) *classification.* If the chili sauce possesses a fairly good color, a score of 14 to 16 points may be given. Chili sauce that scores in this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the color of the chili sauce may be slightly dull but not off color; the color of the tomato ingredient is characteristic of properly prepared, fairly well ripened, properly processed tomatoes; and that the added seasoning ingredients do not seriously detract from the appearance of the product.

(c) (*SStd*) *classification.* Chili sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2197 Consistency.

(a) (*A*) *classification.* Chili sauce that possesses a good consistency may be given a score of 17 to 20 points. "Good consistency" means that the chili sauce is heavy bodied and when emptied from the container to a flat surface forms a moderately mounded mass and shows not more than a slight separation of free liquid at the edges of the mass.

(b) (*C*) *classification.* If the chili sauce possesses only a fairly good consistency a score of 14 to 16 points may be given. Chili sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good consistency" means that the chili sauce, when emptied from the container to a flat surface, may tend to level itself, or may show a moderate separation of free liquid at the edges of the mass, but is not excessively stiff or excessively liquid.

(c) (*SStd*) *classification.* Chili sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2198 Character.

(a) *General.* The factor of character refers to the degree of disintegration of the tomatoes and the tenderness and texture of the onion, celery, pickle relish, or other similar ingredients.

(b) (*A*) *classification.* Chili sauce that possesses a good character may be given a score of 17 to 20 points. "Good character" means that the product does not have a finely comminuted appearance and that the onion, celery, pickle relish, and other similar ingredients are tender, reasonably firm, or crisp in texture.

(c) (*C*) *classification.* If the chili sauce possesses a fairly good character a score of 14 to 16 points may be given. "Fairly good character" means that the product may be finely comminuted and that the other vegetable ingredients may be only fairly tender.

(d) (*SStd*) *classification.* Chili sauce that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2199 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from dark specks or scale-like particles, discolored seeds or pieces of abnormally discolored ingredients, tomato peel, and other defects.

(b) (*A*) *classification.* Chili sauce that is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or eating quality of the product.

(c) (*C*) *classification.* If the chili sauce is fairly free from defects, a score of 14 to 16 points may be given. Chili sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present may be noticeable but are not so large, so numerous, or so prominent as to seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Chili sauce that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2200 Flavor.

(a) (*A*) *classification.* Chili sauce that possesses a good flavor may be given a score of 17 to 20 points. "Good flavor" means a good distinct flavor characteristic of chili sauce properly prepared from good quality ingredients. Such flavor is free from scorching or any objectionable flavor of any kind.

(b) (*C*) *classification.* If the chili sauce possesses a fairly good flavor, a score of 14 to 16 points may be given. Chili sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means that the product may be lacking in good characteristic flavor, but is free from objectionable or off-flavors of any kind.

(c) (*SStd*) *classification.* Chili sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2201 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2202 Score sheet for chili sauce.

Type of container ....

Container size ....

Label ....

Net weight or volume ....

Refractive index ....

Vacuum readings ....

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1] 14-16

		(SStd)	[1] 0–13
Consistency	20	(A)	17–20
		(C)	[1] 14–16
		(SStd)	[1] 0–13
Character	20	(A)	17–20
		(C)	14–16
		(SStd)	[1] 0–13
Absence of defects.	20	(A)	17–20
		(C)	[1] 14–16
		(SStd)	[1] 0–13
Flavor	20	(A)	17–20
		(C)	[1] 14–16
		(SStd)	[1] 0–13
Total score	100		
Normal flavor and odor			
Grade			

[1] indicates limiting rule.

Subpart—United States Standards for Grades of Canned Peas

SOURCE: 20 FR 3252, May 13, 1955; 20 FR 3783, May 27, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY, TYPES, AND GRADES

§ 52.2281 Identity.

(a) "Canned peas" means the canned product prepared from clean, sound, shelled, succulent peas as such product is defined in the Standards of Identity for Canned Peas (21 CFR 155.170(a)) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.2282 Types of canned peas.

(a) "Early peas" means canned succulent peas of Alaska or other smooth skin varieties.

(b) "Sweet peas" means canned succulent peas of sweet, wrinkled varieties.

§ 52.2283 Grades of canned peas.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned peas that possess similar varietal characteristics; that possess a good flavor; that possess a good liquor; that possess a good color; that are practically free from defects; that are tender; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the canned peas may possess a reasonably good liquor or a fairly good liquor; and may possess a reasonably good color if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of canned peas that possess similar varietal characteristics; that possess a good flavor; that possess a reasonably good liquor; that possess a reasonably good color; that are reasonably free from defects; that are reasonably tender; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That the canned peas may possess a fairly good liquor and a fairly good color if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned peas that possess similar varietal characteristics; that possess a fairly good flavor; that possess a fairly good liquor; that possess a fairly good color; that are fairly free from defects; that are fairly tender; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(d) "Substandard" is the quality of canned peas that fail to meet the requirements of U.S. Grade C or U.S. Standard and that may or may not meet the Standard of Quality for Canned Peas issued pursuant to the Federal Food, Drug, and Cosmetic Act.

FILL OF CONTAINER

§ 52.2284 The standard of fill of container.

The standard of fill of container for canned peas is not incorporated in the grade of the finished product, since fill of container, as such, is not a factor of quality for the purposes of these grades. Canned peas shall be considered standard in fill if they meet the standard of fill promulgated under the Federal Food, Drug, and Cosmetic Act (21 CFR 155.170(c)). The standard is as follows: If the container is so filled that, when the peas and liquid are removed from the container and returned thereto, the leveled peas (irrespective of the quantity of the liquid), 15 seconds after they are so returned completely fill the container. A container with lid attached by double seam shall be considered to be completely filled when it is filled to the level 3/16 inch vertical distance below the top of the double seam; and a glass container shall be considered to be completely filled when it is filled to the level ½ inch vertical distance below the top of the container. Canned peas that do not meet this requirement are "Below Standard in Fill."

§ 52.2285 Sizes of peas.

For the purpose of these grades, the sizes of peas are not considered in ascertaining the quality of the product except for the factor of defects in determining pieces of peas. The size of a pea is determined on the basis of the diameter of the circular opening(s) through which the pea will pass or will not pass without force or pressure. The size designations applicable to peas in canned peas and the diameters as aforesaid are shown in Table No. I of this section.

Table I—Sizes of Peas in Canned Peas

Size designation	Diameter of circular openings in inches	
	Will not pass through—	Will pass through—
Size 1		9/32
Size 2	9/32	10/32
Size 3	10/32	11/32
Size 4	11/32	12/32
Size 5	12/32	13/32
Size 6	13/32	14/32
Size 7	14/32	

Factors of Quality

§ 52.2286 Ascertaining the grade.

(a) The grade of canned peas is ascertained by considering the factors of quality which are not scored and those which are scored as follows:

(1) *Factors which are not scored.* (i) Varietal characteristics.

(ii) Flavor.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Liquor	10
Color	10
Defects	30
Maturity and tenderness	50
Total score	100

(b) "Good flavor" means that the product has a good characteristic normal flavor and odor for the maturity and is free from objectionable flavors and objectionable odors of any kind.

(c) "Fairly good flavor" means that the product may be lacking in good characteristic normal flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.2287 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "27 to 30 points" means 27, 28, 29, or 30 points.)

§ 52.2288 Liquor.

(a) (*A*) *classification.* Canned peas that possess a good liquor may be given a score of 9 or 10 points. "Good liquor" means that the color of the liquor is typical, may possess a slight cloudiness or slight tint of green, that not more than a slight quantity of suspended material or sediments may be present, and that the liquor is not viscous.

(b) (*B*) *classification.* If the canned peas possess a reasonably good liquor, a score of 8 points may be given. "Reasonably good liquor" means that the liquor may be cloudy but not off color, that not more than a moderate quantity of suspended material or sediment may be present and that the liquor may be not more than slightly viscous.

(c) (*C*) *classification.* If the canned peas possess a fairly good liquor, a score of 7 points may be given. "Fairly good liquor" means the liquor may be very cloudy, may possess a pronounced accumulation of sediment, may be dull but not off color, and may be viscous but not so viscous that the liquor will not separate from the peas.

(d) (*SStd.*) *classification.* Canned peas that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2289 Color.

(a) (*A*) *classification.* Canned peas that possess a good color may be given a score of 9 to 10 points. "Good color" means that the canned peas possess a color typical of tender peas of similar varietal characteristics, are bright, and that the product is practically bright, and that the appearance of the product is reasonably bright, and that the appearance of the product is reasonably free from peas that materially detract from the overall color appearance (includes peas commonly referred to as "blond" or "cream colored" peas).

(b) (*B*) *classification.* If the canned peas possess a reasonably good color, a score of 7 or 8 points may be given. "Reasonably good color" means that the canned peas possess a color typical of reasonably tender peas of similar varietal characteristics, are reasonably bright, and that the appearance of the product is reasonably free from peas that materially detract from the overall color appearance (includes peas commonly referred to as "blond" or "cream colored" peas).

(c) (*C*) *classification.* Canned peas that possess a fairly good color may be given a score of 5 or 6 points. Canned peas that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule). "Fairly good color" means that the canned peas possess a color typical of fairly tender peas of similar varietal characteristics, and that the appearance of the product is fairly free from peas that materially detract from the overall color appearance (includes peas commonly referred to as "blond" or "cream colored" peas).

(d) (*SStd.*) *classification.* Canned peas that are artificially colored or fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 4 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and, in addition, when artificially colored, the canned peas are "Below Standard in Quality—Artificially Colored."

§ 52.2290 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, pieces of peas, minor discoloration, spotted or otherwise discolored peas, and other defects.

(1) "Harmless extraneous vegetable material" means:

(i) Green tender vegetable material common to the pea plant, such as leaves, pea pods, and stems;

(ii) Non-deleterious or non-poisonous type of thistle buds, nightshade berries, or other similar type buds or berries, from other plants; and

(iii) Other predominant spherical or cylindrical vegetable material from other plants which are tender and similar in color to canned peas.

(2) "Piece of pea" (broken pea)[1] means:

(i) A whole pea from which a cotyledon or a large portion thereof has become separated;

(ii) Two detached whole cotyledons

(iii) Pieces of detached cotyledons aggregating the equivalent of an average size cotyledon; and

(iv) A whole detached skin or portions of detached skin aggregating the equivalent of an average size whole skin.

(3) "Minor discoloration" means discoloration which slightly affects but does not materially affect the appearance or eating quality of the pea.

(4) "Spotted or otherwise discolored" means a pea spotted or otherwise discolored to an extent that the appearance or eating quality of the

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[1] The "percent by count of peas" as pieces of peas is calculated by dividing the total number of pieces of peas by the total number of peas and pieces of peas. (A pea held together by its skin, even though the cotyledons are partly crushed or the skin split is considered an unbroken pea.)

pea is materially affected, such as vivid-green peas, or peas showing brown, yellow, or dark discolored areas. (Does not include peas commonly referred to as "blond" or "cream colored" peas which are scored under the factor of color.)

(b) (*A*) *classification.* Canned peas that are practically free from defects may be given a score of 27 to 30 points "Practically free from defects" means:

(1) That for approximately each 100 ounces of net contents there may be present:

(i) One piece, or pieces, of vegetable material, common to the pea plant having an aggregate area of ¼ square inch (½" × ½") on one surface of the piece, or pieces; or

(ii) One thistle bud or nightshade berry or other spherical piece of vegetable material from other plants, not exceeding the size of a No. 4 size pea; or

(iii) One cylindrical piece or pieces of vegetable material from other plants, not exceeding ½ inch in length in the aggregate.

(2) That 3 percent, by count, of the peas may be pieces of peas in sizes larger than size 2 or in blends of sizes, except that 5 percent, by count, of the peas may be pieces of peas in size 1 and size 2 or in blends of size 1 and size 2.

(3) That ½ of 1 percent, by count, of the peas may be spotted or otherwise discolored: *Provided,* That harmless extraneous vegetable material, pieces of peas, minor discoloration, spotted or otherwise discolored peas, and other defects individually or collectively do not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* If the canned peas are reasonably free from defects, a score of 24 to 26 points may be given. Canned peas that fall into this classification except for pieces of peas, shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means:

(1) That for approximately each 50 ounces of net contents there may be present:

(i) One piece, or pieces, of vegetable material, common to the pea plant having an aggregate area of ¼ square inch (½" × ½") on one surface of the piece, or pieces; or

(ii) One thistle bud or nightshade berry or other spherical piece of vegetable material from other plants, not exceeding the size of a No. 4 size pea; or

(iii) One cylindrical piece or pieces of vegetable material from other plants, not exceeding ½ inch in length in the aggregate.

(2) That 7 percent, by count, of the peas may be pieces of peas; and

(3) That 2 percent, by count, of the peas may be spotted or otherwise discolored: *Provided,* That harmless extraneous vegetable material, pieces of peas, minor discoloration, spotted or otherwise discolored peas, and other defects individually or collectively do not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* If the canned peas are fairly free from defects a score of 21 to 23 points may be given. Canned peas that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means:

(1) That ½ of 1 percent of the drained weight of the peas may be harmless extraneous vegetable material;[2]

(2) That 10 percent of the drained weight of the peas may be pieces of peas,[2] and

(3) That 4 percent, by count, of the peas may be spotted or otherwise discolored: *Provided,* That harmless extraneous vegetable material, pieces of peas, minor discoloration, spotted or otherwise discolored peas, and other defects individually or collectively do not seriously affect the appearance or eating quality of the product.

(e) (*SStd.*) *classification.* Canned peas that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule), and may also be "Below Standard in Quality—Good Food—Not High Grade" for the following applicable reasons: "Excessive Foreign Material," "Excessive Broken Peas," "Excessive Discolored Peas."

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[2] Determined as outlined in the Standard of Quality for Canned Peas (21 CFR 155.170(b)) promulgated under the Federal Food, Drug, and Cosmetic Act.

§ 52.2291 Maturity and tenderness.

(a) *General.* The determination of maturity and tenderness in the (A) and (B) classifications in paragraphs (b) and (c) of this section is based on the brine flotation test as outlined herein and ruptured peas with respect to the (B) classification. The maturity and tenderness in the (C) classification is based on the brine flotation test outlined in this subpart, the alcohol-insoluble solids test and other tenderness test as outlined in the Standard of Quality for Canned Peas (21 CFR 155.170(b)) promulgated under the Federal Food, Drug, and Cosmetic Act.

(b) (*A*) *classification.* Canned peas that are tender may be given a score of 45 to 50 points. "Tender" means that the peas comply with the requirements of Table No. II of this paragraph.

TABLE NO. II

Type	Size	Maximum number of peas that sink in 10 seconds (percent by count)	Percentage of salt in solution
Sweet	All sizes	12	11
		2	13
Early	All sizes	20	11
		2	13½

(c) (*B*) *classification.* If the canned peas are reasonably tender, a score of 41 to 44 points may be given. Canned peas that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule) "Reasonably tender" means:

(1) That the skins of not more than 5 percent, by count, of the peas may be ruptured to a width 1/16 inch or more; and

(2) That in the brine flotation test the peas comply with the requirements shown in Table No. III of this paragraph.

TABLE NO. III

Type	Size	Maximum number of peas that sink in 10 seconds (percent by count)	Percentage of salt in solution
Sweet	All sizes	15	13
		4	15
Early	All sizes	30	13½
		8	15

(d) (*C*) *classification.* If the canned peas are fairly tender, a score of 37 to 40 points may be given. Canned peas that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender" means:

(1) That the skins of not more than 25 percent, by count, of the peas may be ruptured to a width of 1/16 inch or more;[2]

(2) That not less than 90 percent, by count, of the peas are of such tenderness that they are crushable by a weight of not more than 907.2 grams (2 pounds), and[2]

(3) That the alcohol-insoluble solids of early type peas are not more than 23.5 percent and of sweet type peas not more than 21 percent.[2]

The following requirements shown in Table No. IV of this paragraph, with respect to the brine flotation test, provide a guide for scoring canned peas which are fairly tender:

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[2] See footnote 2 to § 52.2290.

TABLE NO. IV

Type	Size	Maximum number of peas that sink in 10 seconds (percent by count)	Percentage of salt in solution
Sweet	All sizes	10	15
Early	All sizes	10	16

(e) (*SStd.*) *classification.* Canned peas that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 36 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule) and may also be "Below Standard in Quality—Good Food—Not High Grade," for the following applicable reasons: "Excessive Cracked Peas," "Not Tender," "Excessively Mealy."

METHODS OF ANALYSES

§ 52.2292 Methods of analyses.

(a) *Brine flotation test.* The brine flotation test utilizes salt solutions of various specific gravities to separate the peas according to maturity. The brine solutions are based on the percentage by weight of pure salt (NaCl) in solution. In making the test a 250 ml. glass beaker is filled with the brine solution to a depth of approximately two inches. The brine equipment, solution and sample should be at the same temperature. Only peas that sink to the bottom of the receptacle within 10 seconds after immersion are counted as "peas that sink." Pieces of peas and loose skins should not be used in making the brine flotation test.

(b) *Alcohol-insoluble solids.* (1) Pour sample on 8-mesh screen, using 8-inch screen for containers of less than 3 pounds net weight, and 12-inch screen for larger quantities. Spread peas evenly and allow to drain. Transfer peas to white pan and remove any foreign material. Add volume of H_2O equal to double volume of original sample.

(2) Pour peas back on screen, spreading evenly; tilt screen as much as possible without shifting peas; and drain two minutes. With cloth wipe surplus moisture from lower surface of screen. Grind drained peas in food chopper until cotyledons are reduced to smooth homogeneous paste, stir, and weigh 20 grams of ground material into 600 ml. beaker. Add 300 ml. of 80 percent alcohol, stir, cover beaker, and bring to boil. Simmer slowly 30 minutes.

(3) Fit into Buchner funnel filter paper of appropriate size (previously prepared by drying in flat-bottom dish two hours at temperature of boiling H_2O, covering with tight-fitting cover, cooling in desiccator, and weighing at once). Apply suction and transfer contents of beaker to the Buchner funnel in such manner as to avoid running over edge of paper. Suck dry and wash material on filter with 80 percent alcohol until washings are clear and colorless.

(4) Transfer filter paper and alcohol-insoluble solids to dish used in preparation of filter paper, dry uncovered two hours at temperature of boiling H_2O, place cover on dish, cool in desiccator, and weigh at once. From this weight deduct weight of dish, cover, and paper. Calculate percent by weight of alcohol-insoluble solids.

(c) *Tenderness test.* Remove the skin of a pea, placing one of its cotyledons, with flat surface down on the approximate center of the level, smooth surface of a rigid plate, lowering a horizontal disc to the highest point of the cotyledon, and measuring the height of the cotyledon. The disc must be of rigid material and affixed to a rod held vertically by a support through which the rod can freely move upward or downward. The lower face of the disc must be a smooth, plane surface horizontal to the vertical axis of the rod. A device to which weight may be added is affixed to the upper end of the rod. Before lowering the disc to the cotyledon, adjust the combined weight of disc, rod, and device to 100 grams. After measuring the height of the cotyledon, and shifting the plate, if necessary, so that the cotyledon is under the approximate center of the disc, add weight to the device at a uniform, continuous rate of 12 grams per second until the cotyledon is pressed to one-fourth its previously measured height, or until the combined weight of disc, rod, and device is 907.2 grams (2 pounds). A pea so tested shall be considered to be crushed when its cotyledon is pressed to one-fourth its original height.

LOT INSPECTION AND CERTIFICATION

§ 52.2293 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2294 Score sheet for canned peas.

Size and kind of container ....
Label..........
Container mark or identification..........
Net weight (in ounces)..........
Vacuum readings (in inches)..........
Type..........
Size..........

Factors		Score points	
Liquor	10	(A)	9–10
		(B)	8
		(C)	7
		(SStd.)	[1] 0–6
Color	10	(A)	9–10
		(B)	7–8
		(C)	[2] 5–6
		(SStd.)	[1] 0–4
Defects	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Maturity and tenderness	50	(A)	45–50
		(B)	[1] 41–44
		(C)	[1] 37–40
		(SStd.)	[1] 0–36
Total score	100		

Flavor and odor ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Frozen Green Beans and Frozen Wax Beans

SOURCE: 48 FR 26753, June 10, 1983, unless otherwise noted.

§ 52.2321 Product description.

"Frozen green beans" and "frozen wax beans," hereinafter called "frozen beans," means the frozen product prepared from the clean, sound, succulent pods of the bean plant. The pods are stemmed, washed, blanched, sorted, and properly drained. The product is then frozen in accordance with good commercial practice and maintained at temperatures necessary or the preservation of the product.

§ 52.2322 Styles.

(a) *Whole* means frozen beans consisting of whole pods of any length.

(b) *Cut* means frozen beans consisting of pods that are cut transversely into pieces less than 7 cm (2¾ in) but not less than 1.9 cm ¾ in) in length.

(c) *Short cut* means frozen beans consisting of pods that are cut transversely into pieces less than 1.9 cm (¾ in) in length.

(d) *Mixed* means a mixture of two or more of the following styles of frozen beans: whole, cut, or short cut.

(e) *Sliced lengthwise* means frozen beans consisting of pods that are sliced lengthwise and may also be known as *French Style, French Sliced Julienne,* or *Shoestring.*

§ 52.2323 Style classification and tolerances.

(a) *General.* For the purpose of determining acceptance with the styles of *cut* and *short cut,* pieces are considered as "minor" or "major" defects according to their lengths as specified in Table I. Each "X" represents one (1) defect.

(b) *Requirements.* Tolerances for style requirements are contained in Tables II and III.

TABLE I—STYLE DEFECT CLASSIFICATION

Style	Defect	Classification	
		Minor	Major
Cut	Each piece shorter than 1.3 cm (½ in) length.	X	
	Each piece longer than 7 cm (2¾ in) in length.		X.
Short cut.	Each piece 1.9 cm (¾ in) or longer but not longer than 4.5 cm (1¾ in) in length.	X	

TABLE I—STYLE DEFECT CLASSIFICATION—Continued

Style	Defect	Classification	
		Minor	Major
	Each piece longer than 4.5 cm (1¾ in) in length.	....	X.

TABLE II—TOLERANCES FOR CUT STYLE

	Total [3]	Major
AQL [2]	20.0	2.5

[2] AQL expressed as percent defective.
[3] Total = Minor + Major.

TABLE III—TOLERANCES FOR SHORT CUT STYLE

	Total [3]	Major
AQL [2]	20.0	0.65

[2] AQL expressed as percent defective.
[3] Total = Minor + Major.

§ 52.2324 Types.

The type of frozen beans is not incorporated in the grades of finished product, since it is not a factor of quality. The types of frozen beans are described as "round type" and "Romano or Italian type."

(a) *Round type* means frozen beans having a width not greater than 1½ times the thickness of the beans.

(b) *Romano or Italian type* means frozen beans having a width greater than 1½ times the thickness of the beans.

§ 52.2325 Kinds of pack.

The kind of pack of frozen beans is not incorporated in the grades of finished product, since it is not a factor of quality. The kinds of pack of frozen beans are described as "regular process," "multi-blanch process," and "special pack."

(a) *Regular process* means the frozen beans are processed in such a manner that the brightness is not affected by the process.

(b) *Multi-blanch process* means the frozen beans are intentionally processed in such a manner that the brightness is affected by the process.

(c) *Special pack* means the frozen bean pack intentionally contains beans of two or more varietal characteristics (such as a mixture of green and wax beans).

§ 52.2326 Definitions of terms.

(a) *Acceptable Quality Level* (AQL) means the maximum percent of defective units or the maximum number of defects per hundred units of product that, for the purpose of acceptance sampling, can be considered satisfactory as a process average.

(b) *Blemished* means any unit that is affected by discoloration, or any other means to the extent that the appearance or eating quality is adversely affected:

(1) Slightly;

(2) Materially; or

(3) Seriously.

(c) *Brightness* means the extent that the overall appearance of the sample unit as a mass is affected by dullness. (Applies to "regular process" only).

(1) Grade A—not affected.

(2) Grade B—slightly affected.

(3) Grade C—materially affected.

(4) Substandard—seriously affected.

(d) *Character.*—(1) *Round type—Green Beans.*— (i) *Good character* means the pods are full fleshed; after cooking, the pods are tender and the seeds are not mealy.

(ii) *Reasonably good character* means the pods are reasonably fleshy; after cooking, the pods are tender and the seeds are not mealy.

(iii) *Fairly good character* means the pods have not entirely lost their fleshy structure; after cooking, the pods may contain edible fiber (no inedible fiber allowed) and the seeds may be slightly mealy.

(iv) *Poor character* means the beans fail the requirements for "fairly good character."

(2) *Round type—Wax Beans.*—(i) *Good character* means the pods are full fleshed and may show slight breakdown of the flesh between seed cavities; after cooking, the pods are tender and the seeds are not mealy.

(ii) *Reasonably good character* means the pods are reasonably fleshy and may show substantial breakdown of the flesh between the seed cavities;

after cooking, the pods are tender and the seeds are not mealy.

(iii) *Fairly good character* means the pods may show total breakdown of the flesh between the seed cavities with no definite seed pocket but still retain flesh on the inside pod wall; after cooking, the pods may contain edible fiber (no inedible fiber allowed) and the seeds may be slightly mealy.

(iv) *Poor character* means the beans fail the requirements for "fairly good character."

(3) *Romano or Italian type.*—(i) *Good character* means the pods have a full inner membrane, typical of the variety, and are tender after cooking.

(ii) *Reasonably good character* means the pods have a reasonably well developed inner membrane and are reasonably tender after cooking.

(iii) *Fairly good character* means the pods may lack an inner membrane and are fairly tender after cooking. The pods may contain edible fiber (no inedible fiber allowed).

(iv) *Poor character* means the beans fail the requirements for "fairly good character."

(4) *Fiber.*—(i) *Edible fiber* means fiber developed in the wall of the bean pod that is noticeable upon chewing but may be consumed with the rest of the bean material without objection.

(ii) *Inedible fiber* means fiber developed in the wall of the bean pod that is objectionable upon chewing and tends to separate from the rest of the bean material.

(e) *Defect* means any nonconformance of a unit(s) of product from a specified requirement of a single quality characteristic.

(f) *Detached stem* means the stem or portion of stem that attaches the beam pod to the vine stem and has become separated from the pod.

(g) *Extraneous vegetable material (EVM)*.—(1) *Edible EVM* means tender, green, harmless, and edible vegetable material similar in color and texture to that of bean pods, including but not limited to:

(i) Leaves or portion of leaves or grass;

(ii) Material from plants other than the bean plant.

(2) *Inedible EVM* means any harmless plant material that is not tender, may not be green, may be tough, and includes but is not limited to:

(i) Discolored leaves or grass or portions thereof;

(ii) Bean stalk or vine material;

(iii) Material from plants other than the bean plant.

(h) *Flavor and odor.*—(1) *Good flavor and odor* means the product, after cooking, has a good characteristic flavor and odor and is free from objectionable flavors and odors of any kind.

(2) *Fairly good flavor and odor* means the product, after cooking, may be lacking in good flavor and odor but is free from objectionable flavors and odors of any kind.

(i) *Mechanical damage* means any unit that is broken or split in two parts, or has very ragged edges, or is crushed, or is damaged by mechanical means to such an extent that the appearance is seriously affected.

(j) *Sample unit* means the amount of product specified to be used for inspection. It may be:

(1) The entire contents of a container;

(2) A portion of the contents of a container;

(3) A combination of the contents of two or more containers; or

(4) A portion of unpacked product.

(k) *Sloughing* means the separation of the outer layer of tissue from the bean pod giving a ragged or feathery appearance to the unit.

(l) *Small piece (Sliced lengthwise style only)* means a piece of pod less than 1.9 cm (¾ in) in the longest dimension and loose seeds and pieces of seeds.

(m) *Tough strings* mean strings or pieces of strings, removed from the cooked bean pod, that will support a 227 g (½ lb) weight for not less than five (5) seconds.

(n) *Unit* means a bean pod or any individual portion thereof.

(o) *Unsnipped unit* means a unit without an attached stem but with a stem collar that is hard or tough and would be objectionable upon eating.

(p) *Unstemmed unit* means a unit with the attached stem or portion thereof that attaches the pod to the vine stem.

[48 FR 26753, June 10, 1983; 48 FR 30093, June 30, 1983]

§ 52.2327 Recommended sample unit sizes.

(a) In all styles, other than sliced lengthwise, a mechanically damaged unit that is broken into separate parts will be reassembled to approximate its original size and counted as one unit in the sample unit size.

(b) *Style requirements.* Requirements for cut and short cut styles are based on the recommended sample unit size of 200 units.

(c) *Quality requirements.* Requirements for factors of quality are based on the following recommended sample unit sizes for the respective style:

(1) *Classified defects and character defects.* (i) Sliced lengthwise style—250 g (8.8 oz).

(ii) Whole style—100 units.

(iii) All other styles—200 units.

(2) *Extraneous vegetable material defects (EVM).* (i) On-line grading only (all styles)—1419 g (50 oz). Optional—2838 g (100 oz). Optional—5675 g (200 oz).

(ii) Lot grading only (all styles)—Entire sample.

§ 52.2328 Grades.

(a) *U.S. Grade A* is the quality of frozen beans that:

(1) Meets the following prerequisites in which the beans:

(i) Have similar varietal characteristics (except "special packs");

(ii) Have a good flavor and odor;

(iii) Have a good overall brightness as a mass that is not affected by dullness ("Regular process" only);

(iv) Are practically free from small pieces for the style of "sliced lengthwise";

(v) Have an appearance or eating quality that is not materially affected by sloughing;

(vi) Are practically free from EVM;

(A) On-line grading—within the limits for defects as classified in Table VI and specified in Table XIII.

(B) Lot grading—Not more than two (2) pieces of EVM per 795 g (28 oz) of which not more than one (1) piece may be major.

(2) Is within the limits for defects as classified in Table IV or V and specified in Table VII, VIII, IX, X, XI, or XII, as applicable, for the style.

(b) *U.S. Grade B* is the quality of frozen beans that:

(1) Meets the following prerequisities in which the beans:

(i) Have similar varietal characteristics (except "special pack");

(ii) Have a good flavor and odor;

(iii) Have a reasonably good overall brightness as a mass which may be slightly dull ("Regular process" only);

(iv) Are reasonably free from small pieces for the style of "sliced lengthwise;"

(v) Have an appearance or eating quality that is not seriously affected by sloughing;

(vi) Are reasonably free from EVM;

(A) On-line grading—within the limits for defects as classified in Table VI and specified in Table XIII.

(B) Lot grading—Not more than two (2) pieces of EVM per 395 g (14 oz) of which not more than one (1) piece may be major.

(2) Is within the limits for defects as classified in Table IV or V and specified in Table VII, VIII, IX, X, XI, or XII, as applicable, for the style.

(c) *U.S. Grade C* is the quality of frozen beans that:

(1) Meets the following prerequisites in which the beans:

(i) Have similar varietal characteristics (except "special packs");

(ii) Have a fairly good flavor and odor;

(iii) Have a reasonably good overall brightness as a mass that may be dull but is off-color ("Regular process" only);

(iv) Are fairly free from EVM;

(A) On-line grading—within the limits for defects as classified in Table VI and specified in Table XIII.

(B) Lot grading—Not more than two (2) pieces of EVM per 200 g (7 oz) of which not more than one (1) piece may be major.

(2) Is within the limits for defects as classified in Table IV or V and specified in Table VII, VIII, IX, X, XI, or XII, as applicable, for the style.

(d) Substandard is the quality of frozen beans that fails to meet the requirements of *U.S. Grade C.*

§ 52.2329 Factors of quality.

The grade of frozen beans is based on requirements for the following quality factors:

(a) *Prerequisite quality factors.* (1) Similar varietal characteristics (except "special packs");

(2) Flavor and odor;

(3) Brightness ("Regular process" only);

(4) Freedom from small pieces in the "sliced lengthwise" style;

(5) Freedom from sloughing;

(6) Freedom from extraneous vegetable material (EVM).

(b) *Classified quality factors.* (1) Blemished;

(2) Mechanical damage (all styles except "sliced lengthwise");

(3) Workmanship;

(4) Tough strings;

(5) Character.

§ 52.2330 Classification of defects.

All defects, other than character defects, are classified as minor, major, or severe. All character defects are classified as reasonably good, fairly good, or poor. Each "X" in Tables IV and V represents "one (1) defect."

TABLE IV

Quality factor	Defects	Classification		
		Minor	Major	Severe
Classification of Defects (Other Than Character and EVM) Cut, Short Cut, Whole, Mixed Styles				
Blemished	Slightly (each unit).	X		
	Materially (each unit).		X	
	Seriously (each unit).			X.
Mechanical damage.	(Each reassembled unit).	X		
Workmanship	Unstemmed (each unit).			X.
	Detached stem (each unit).			X.
	Unsnipped unit (each unit).		X	
Tough strings	(Each unit)		X	
Sliced Lengthwise Style				
Blemished	Slightly (each 2.5 g).	X		
	Materially (each 2.5 g).		X	
	Seriously (each 2.5 g).			X.
Workmanship	Unstemmed (each unit).			X.
	Detached stem (each unit).			X.
	Unsnipped unit (each unit).		X	
Tough strings	(Each unit)		X	

TABLE V—CLASSIFICATION OF CHARACTER DEFECTS, ALL STYLES

Quality factor	Defect	Reasonably good	Fairly good	Poor
Character.	"B" (each unit)	X		
	"C" (each unit)		X	
	"SSTD" (each unit)			X.

Note.—For sliced lengthwise style only—Each 2.5 g increment equals one (1) unit.

TABLE VI—CLASSIFICATION OF EXTRANEOUS VEGETABLE MATERIAL (EVM), ALL STYLES

Quality factor	Defect	Classification	
		Minor	Major
Extraneous vegetable material.	Edible EVM (each piece).	X	
	Inedible EVM (each piece).		X.

§ 52.2331 Tolerances for defects.

TABLE VII—ALL CLASSIFIED DEFECTS EXCEPT CHARACTER AND EVM CUT, SHORT CUT, AND MIXED STYLES (200 PLAN)

	Grade A			Grade B			Grade C		
	Total [4]	Major	Severe	Total [4]	Major	Severe	Total [4]	Major	Severe
AQL [1]	6.5	1.5	0.65	8.5	2.5	1.0	12.5	4.0	2.5

[1] AQL expressed as defects per hundred units.
[4] Total = Minor + Major + Severe.

TABLE VIII—ALL CLASSIFIED DEFECTS EXCEPT CHARACTER AND EVM, WHOLE STYLE (100 PLAN)

	Grade A			Grade B			Grade C		
	Total [4]	Major	Severe	Total [4]	Major	Severe	Total [4]	Major	Severe
AQL [1]	10.0	2.5	1.0	15.0	4.0	2.5	20.0	6.5	4.0

[1] AQL expressed as defects per hundred units.
[4] Total = Minor + Major + Severe.

TABLE IX—ALL CLASSIFIED DEFECTS EXCEPT CHARACTER AND EVM, SLICED LENGTHWISE STYLE (100 PLAN)

	Grade A			Grade B			Grade C		
	Total [4]	Major	Severe	Total [4]	Major	Severe	Total [4]	Major	Severe
AQL [1]	6.5	2.5	1.5	10.0	4.0	2.5	15.0	6.5	4.0

[1] AQL expressed as defects per hundred units (100—2.5 g increments in 250 g).
[4] Total = Minor + Major + Severe.

TABLE X—CLASSIFIED DEFECTS FOR CHARACTER ONLY, CUT, SHORT CUT, AND MIXED STYLES (200 PLAN)

	Grade A			Grade B		Grade C
	Total [5]	Fairly good	Poor	Total [6]	Poor	Total [7]
AQL [2]	6.5	0.65	0.15	6.5	0.65	6.5

[2] AQL expressed as percent defective.
[5] Total = Reasonably good + Fairly good + Poor.
[6] Total = Fairly good + Poor.
[7] Total = Poor.

TABLE XI—CLASSIFIED DEFECTS FOR CHARACTER ONLY, WHOLE STYLE (100 PLAN)

	Grade A			Grade B		Grade C
	Total [5]	Fairly good	Poor	Total [6]	Poor	Total [7]
AQL [2]	6.5	0.65	0.15	6.5	0.65	6.5

[2] AQL expressed as percent defective.
[5] Total = Reasonably good + Fairly good + Poor.
[6] Total = Fairly good + Poor.
[7] Total = Poor.

TABLE XII—CLASSIFIED DEFECTS FOR CHARACTER ONLY, SLICED LENGTHWISE STYLE (100 PLAN)

	Grade A		Grade C
	Total [6]	Poor	Total [7]
AQL [5]	6.5	0.65	6.5

[5] AQL expressed as percent defective (100-2.5 g increments in 250 g).
[6] Total = Fairly good + Poor.
[7] Total = Poor.

TABLE XIII—EXTRANEOUS VEGETABLE MATERIAL (EVM), ALL STYLES (ON-LINE ONLY), (50 PLAN—OPTIONAL 100/200 PLAN)

	Tolerances					
	Grade A		Grade B		Grade C	
	Total [2]	Major	Total [2]	Major	Total [2]	Major
AQL [1]	5.0	2.5	10.0	5.0	20.0	10.0

[1] AQL expressed as defects per hundred units.
[2] Total = Minor + Major.

[48 FR 26753, June 10, 1983; 48 FR 30093, June 30, 1983]

§ 52.2332 Sample size.

The sample size used to determine whether the requirements of these standards are met shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1—52.83) for lot grading and on-line grading, as applicable.

§ 52.2333 Style requirement criteria.

(a) *Lot grading.* A lot of frozen beans is considered as meeting the requirements for style if the Acceptable Quality Levels (AQL) in Tables II and III, as applicable for the style, are not exceeded.

(b) *On-line grading.* A portion of production is considered as meeting the requirements for style if the Acceptable Quality Levels (AQL) in Tables II and III, as applicable for the style, are not exceeded.

(c) *Single sample unit.* Each single sample unit submitted for style evaluation will be treated individually and is considered as meeting the requirements for style if the Acceptable Quality Levels (AQL) in Tables II and III, as applicable for the style, are not exceeded.

§ 52.2334 Quality requirement criteria.

(a) *Lot grading.* A lot of frozen beans is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.2328 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables VII, VIII, IX, X, XI, and XII, as applicable for the style, are not exceeded.

(b) *On-line grading.* A portion of production is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.2328 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables VII, VIII, IX, X, XI, XII, and XIII, as applicable for the style, are not exceeded.

(c) *Single sample unit.* Each single sample unit submitted for quality evaluation will be treated individually and is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.2328 are met; and

(2) The Acceptable Quality Levels (AQL) in Tables VII, VIII, IX, X, XI, and XII, as applicable for the style, are not exceeded.

[48 FR 26753, June 10, 1983; 48 FR 30093, June 30, 1983]

Subpart—United States Standards for Grades of Dehydrated (Low-Moisture) Apples[1]

SOURCE: 42 FR 33259, June 30, 1977; 42 FR 37968, July 26, 1977, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.2341 Product description.

Dehydrated (low-moisture) apples, referred to as "dehydrated apples," are prepared from clean and sound fresh or previously dried (or evaporated) apples from which the peels and cores have been removed and which have been cut into segments. The dried (or evaporated) apple segments may be cut further into smaller segments in preparation for dehydration whereby practically all of the moisture is removed to produce a very dry texture and are prepared to assure a clean, sound, wholesome product. The sulphur dioxide content of the finished product may not exceed 1,000 parts per million. No other additives may be present.

§ 52.2342 Styles.

(a) *Pie pieces.* Pie pieces consist predominantly of parallel-cut, irregularly shaped pieces, approximating 3/16-inch (5 mm) or less in thickness and ¾-inch (19 mm) or longer in their longest dimension.

(b) *Flakes.* Flakes consist predominantly of parallel-cut, irregularly shaped pieces, approximating 3/16-inch (5 mm) or less in thickness and less than ¾-inch (19 mm) in their longest dimension.

(c) *Wedges.* Wedges are fairly thick sectors, approximating no more than ⅝-inch (16 mm) at their greatest thickness.

(d) *Sauce pieces.* Sauce pieces are small popcorn-like units of varying shapes and sizes, not otherwise conforming to the style of flakes, and in which practically all of the units when free-flowing will pass through 0.446-inch (11.3 mm) square openings. Sauce pieces of this style are considered "finely-cut" when practically all of the units will pass through ⅜-inch (9.5 mm) square openings.

§ 52.2343 Grades.

(a) "U.S. Grade A" is the quality of dehydrated apples in which the moisture content of the finished product is not more than 3 percent by weight; that have a normal flavor and odor, that have a good color, that are reasonably uniform in size, that are practically free from defects, that have a good texture, and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of dehydrated apples in which the moisture content of the finished product is not more than 3.5 percent by weight; that have a normal flavor and odor, that have a reasonably good color, that are fairly uniform in size, that are reasonably free from defects, that have a reasonably good texture, and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(c) "Substandard" is the quality of dehydrated apples that fail to meet the requirements of U.S. Grade B.

§ 52.2344 Determining the grade.

In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(a) *Factors not rated by score points.*

(1) Moisture content.

(2) Flavor and odor.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Score Points
Color	20
Uniformity of size	20
Defects	40
Texture	20
Total score	100

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State Laws and Regulations.

(c) The factors of flavor and odor, color, and texture are determined both upon the dehydrated apples and the cooked product as outlined in this subpart.

(d) "Normal flavor and odor" means that the dehydrated apples and the cooked product have a characteristic flavor and odor that is free from objectionable flavors or objectionable odors of any kind. A flavor and odor in the dehydrated apples indicative of proper sulphur treatment is not considered objectionable.

§ 52.2345 Determining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2346 Color.

(a) (*A*) *classification.* Dehydrated apples that have a good color may be given a score of 17 to 20 points. "Good color" means that the dehydrated apples have a reasonably uniform, reasonably bright, light yellow to yellow-white characteristic color which, upon cooking, is a reasonably bright color typical of cooked dehydrated apples that have been properly prepared and processed.

(b) (*B*) *classification.* If the dehydrated apples have a reasonably good color, a score of 14 to 16 points may be given. Dehydrated apples that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the dehydrated apples have a fairly uniform, fairly bright, light yellow-amber or light yellow to yellow-white characteristic color and which, upon cooking, may be variable in color but is typical of cooked dehydrated apples that have been properly prepared and processed.

(c) (*SStd*) *classification.* Dehydrated apples that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2347 Uniformity of size.

(a) (*A*) *classification.* Dehydrated apples that are reasonably uniform in size may be given a score of 17 to 20 points. "Reasonably uniform in size" means that the dehydrated apples comply with the requirements of Table I of this paragraph.

TABLE I—UNIFORMITY OF SIZE—U.S. GRADE A

[In percent]

Sizes	Pie pieces	Flakes	Wedges	Sauce
Pieces less than ¾ in (19mm) in longest dimension		95 or more		
Pieces ¾ in (19 mm) or more in longest dimension	75 or more			
Pieces 1 in (25.4 mm) or more in longest dimension	35 or more		05 or more	
Pieces 3/16 in (5 mm) or less at greatest thickness	98 or more	98 or more		
Pieces ⅝ in (16 mm) or less at greatest thickness			98 or more	
Pass through No. 4 sieve	10 or less			
Pass through No. 8 sieve	5 or less	10 or less		10 or less.
Pass through No. 16 sieve		2 or less		2 or less.
Pass through .446-in sieve				95 or more.

NOTE: All percentages are percent by weight.

(b) (*B*) *Classification.* If the dehydrated apples are fairly uniform in size a score of 14 to 16 points may be given. Dehydrated apples that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size" means that the dehydrated apples comply with the requirements of Table II of this paragraph.

TABLE II—UNIFORMITY OF SIZE—U.S. GRADE B

[In percent]

Sizes	Pie pieces	Flakes	Wedges	Sauce
Pieces less than ¾ in (19 mm) in longest dimension		85 or more		
Pieces ¾ in (19 mm) or more in longest dimension	60 or more			
Pieces 1 in (25.4 mm) or more in longest dimension	25 or more		85 or more	
Pieces 3/16 in (5 mm) or less at greatest thickness	98 or more	98 or more		
Pieces ⅝ in (16 mm) or less at greatest thickness			98 or more	
Pass through No. 4 sieve	15 or less			
Pass through No. 8 sieve	5 or less			
Pass through No. 16 sieve		5 or less		5 or less
Pass through .446-in sieve				85 or more

NOTE: All percentages are percent by weight.

(c) (*SStd*) *classification.* Dehydrated apples that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2348 Defects.

(a) *Definitions of defects.* The factor of defects refers to the degree of freedom from carpel tissue; from units damaged by pieces of peel, bruises or other discoloration, bitter pit or corky tissue, water core, or damaged by other means; from units damaged by calyxes and stems; and from defects not specifically mentioned as defined in this paragraph.

(1) *Practically free from carpel tissue.* "Practically free from carpel tissue" means that for each 1¾ ounces (49.6 g) of dehydrated apples any carpel tissue that may be present does not exceed in the aggregate an area equal to ½-square inch (3.25 cm²).

(2) *Reasonably free from carpel tissue.* "Reasonably free from carpel tissue" means that for each 1¾ ounces (49.6 g) of dehydrated apples any carpel tissue that may be present in the aggregate exceeds an area equal to ½-square inch (3.25 cm²) but does not exceed an area equal to 1 square inch (6.5 cm²).

(3) *Damaged by pieces of peel.* "Damaged by pieces of peel" means pieces of peel, regardless of color, which in their greatest dimension exceed ¼-inch (6.35 mm).

(4) *Damaged by bruises or other discoloration, bitter pit or corky tissue, water core, and other similar defects.* "Damaged by bruises or other discoloration, bitter pit or corky tissue, water core, and other similar defects" means the appearance or eating quality of the unit is materially affected by such defects.

(5) *Damaged by other means.* "Damaged by other means" means defects not specifically mentioned which materially affect the appearance or edibility of the piece so damaged.

(6) *Damaged by calyxes and stems.* "Damaged by calyxes and stems" means the appearance or eating quality of the unit is materially affected by such defects including portions thereof.

(7) *Defects not specifically mentioned.* "Defects not specifically mentioned" include but are not limited to such apple materials as excessive loose seeds or loose stems which are not considered as damaged units and which singly or collectively materially affect the appearance or edibility of the product.

(b) (*A*) *Classification.* Dehydrated apples that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that dehydrated apples of any style are practically free from carpel tissue and defects not specifically mentioned and, in addition, the defects present do not exceed the allowances set forth in Table III.

(c) (*B*) *classification.* If the dehydrated apples are reasonably free from defects, a score of 28 to 33 points may be given. Dehydrated apples that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the dehydrated apples of any style are reasonably free from carpel tissue and defects not specifically mentioned and, in addition, the defects present do not exceed the allowances set forth in Table III.

TABLE III—DEFECTS

Defects	U.S. grade A		U.S. grade B	
	Pie pieces, wedges (percent by weight)	Flakes, sauce pieces (percent by weight)	Pie pieces, wedges (percent by weight)	Flakes, sauce pieces (percent by weight)
Pieces of peel	10	5	15	8
Bruises or other discolorations				
Bitter pit or corky tissue				
Water core				
Other similar defects				
Damaged by other means				
Calyxes and stems				
Provided this maximum is not exceeded: Calyxes and stems	1	½	2	1

(d) (*SStd*) *classification.* Dehydrated apples that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2349 Texture.

(a) (*A*) *classification.* Dehydrated apples that have a good texture may be given a score of 17 to 20 points. "Good texture" means with respect to the dehydrated product that the units are brittle; and, upon cooking in accordance with the methods outlined in this subpart, the textures of the respective styles are as follows:

(1) *Pie pieces; wedges.* The units are reasonably uniform in tenderness and texture; are practically free from any tough (or "leathery") units; and there is no more than moderate disintegration except for small pieces that may have been present.

(2) *Flakes.* The units are reasonably uniform in tenderness and texture; are practically free from any tough (or "leathery") units; and there may be considerable disintegration of the pieces but not to the degree of a grainy applesauce consistency.

(3) *Sauce pieces.* The mass has a reasonably uniform texture and finish ranging from that of a coarse, grainy applesauce to a fine, grainy applesauce, practically without any hard particles.

(b) (*B*) *classification.* If the dehydrated apples have a reasonably good texture, a score of 14 to 16 points may be given. Dehydrated apples that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably good texture" means with respect to the dehydrated product that the units are brittle; and, upon cooking in accordance with the methods outlined in this subpart, the textures of the respective styles are as follows:

(1) *Pie pieces; wedges.* The units are fairly uniform in tenderness and texture but moderately free from any tough (or "leathery") units; and there may be no more than moderate disintegration except for small pieces that may have been present.

(2) *Flakes.* The units are fairly uniform in tenderness and texture but moderately free from any tough (or "leathery") units; and the pieces may have become disintegrated to the degree of a grainy applesauce consistency.

(3) *Sauce pieces.* The mass has a fairly uniform texture and finish ranging from that of a coarse, grainy applesauce to a fine, grainy applesauce; and hard particles may be noticeable but not objectionable.

(c) (*SStd*) *classification.* Dehydrated apples that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2350 Explanations of methods and analyses.

(a) *Moisture method.* "Moisture" in dehydrated apples is determined in accordance with the official method applicable to dried fruits as outlined in the "Official Methods of Analysis of the Association of Official Analytical Chemists."

(b) *Cooking procedures.* A representative sample of not less than 2 ounces avoirdupois (about 55 g) to approximately 4 ounces avoirdupois (about 110 g) is recommended for purposes of the cooking procedures in this paragraph. The procedures for cooking to determine compliance with requirements for color and texture are as follows for the respective styles:

(1) *Pie pieces.* Add 1 part, by weight, of pie pieces to 6 parts, by weight, of water just below the boiling point; cover, bring to a boil, and simmer for 20 minutes.

(2) *Flakes.* Add 1 part, by weight, of the flakes to 5 parts, by weight, of water just below the boiling point; cover, bring to a boil, and simmer for 15 minutes.

(3) *Wedges.* Add 1 part, by weight, of the wedges to 6 parts, by weight, of water just below the boiling point; cover, bring to a boil, and simmer for 30 minutes.

(4) *Sauce pieces.* Add 1 part, by weight, of the sauce pieces to 8 parts, by weight, of water just below the boiling point; cover, bring to a boil, and simmer for 15 minutes.

(c) *Sifting methods.* The technique for determining compliance with the requirements for pieces that pass through U.S. Standard No. 4, No. 8, and No. 16 sieves is as follows:

(1) *Pie pieces.* (i) From a 4-ounce (about 110 g) representative sample of dehydrated apple "pie pieces," remove all pieces which are ¾-inch (19 mm) or more in their longest dimension;

(ii) Place the remainder of the sample on a U.S. Standard No. 4, 8-inch (20.3 cm) diameter, full-height sieve nested on top of a U.S. Standard No. 8, 8-inch (20.3 cm) diameter, full-height sieve to which a bottom pan has been attached;

(iii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches (50 cm) in a straight line and return to its original position, repeating the movement 20 times;

(iv) Weigh the fine material sifted through to the bottom pan and calculate on the basis of the original sample (under paragraph (c)(1)(i) of this section) as the percentage which passed through the No. 8 sieve; and

(v) Weigh the material sifted through the No. 4 sieve and remaining on the No. 8 sieve; calculate on the basis of the original sample (under paragraph (c)(1)(i) of this section) and add the percentage which remained on the No. 8 sieve to the percentage which passed through the No. 8 sieve (under paragraph (c)(1)(iv) of this section) as the total percentage which passed through the No. 4 sieve.

(2) *Flakes.* (i) From a 4-ounce (about 110 g) representative sample of dehydrated apple "flakes" remove all pieces which are ¾-inch (19 mm) or more in their longest dimension;

(ii) Place the remainder of the sample on a U.S. Standard No. 8, 8-inch (20.3 cm) diameter, full-height sieve nested on top of a U.S. Standard No. 16, 8-inch (20.3 cm) diameter, full-height sieve to which a bottom pan has been attached;

(iii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches (50 cm) in a straight line and return to its original position, repeating the movement 20 times;

(iv) Weigh the fine material sifted through to the bottom pan and calculate on the basis of the original sample (under paragraph (c)(2)(i) of this section) as the percentage which passed through the No. 16 sieve; and

(v) Weigh the material sifted through the No. 8 sieve and remaining on the No. 16 sieve; calculate on the basis of the original sample (under paragraph (c)(2)(i) of this section) and add the percentage which remained on the No. 16 sieve to the percentage which passed through the No. 16 sieve (under paragraph (c)(2) (iv) of this section) as the total percentage which passed through the No. 8 sieve.

(3) *Sauce pieces.* (i) From a 4-ounce (about 110 g) representative sample of dehydrated apple "sauce pieces" remove all pieces which in their smallest dimensions will not pass readily through 0.446-inch (11.3 mm) square openings by gentle hand pressing;

(ii) Place the remainder of the sample on a U.S. Standard No. 8, 8-inch (20.3 cm) diameter, full-height sieve nested on top of a U.S. Standard No. 16, 8-inch (20.3 cm) diameter, full-height sieve to which a bottom pan has been attached;

(iii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches (50 cm) in a straight line and return to its original position, repeating the movement 20 times;

(iv) Weigh the fine material sifted through to the bottom pan and calculate on the basis of the original sample (under paragraph (c)(3)(i) of this section) as the percentage which passed through the No. 16 sieve; and

(v) Weigh the material sifted through the No. 8 sieve and remaining on the No. 16 sieve; calculate on the basis of the original sample (under paragraph (c)(3)(i) of this section) and add the percentage which remained on the No. 16 sieve to the percentage which passed through the No. 16 sieve (under paragraph (c)(3)(iv) of this section) as the total percentage which passed through the No. 8 sieve.

§ 52.2351 Determining the grade of a lot.

The grade of a lot of dehydrated apples covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.83).

§ 52.2352 Score sheet.

Size and kind of container ....
Container mark or identification ....
Label (including SO_2 content, if any) ....
Net weight ....
Moisture content (percent) ....
Style ....

Factors		Score points	
Color	20	(A)	17 to 20.
		(B)[1]	14 to 16.
		(SStd)	[1] 0 to 13.
Uniformity of size.	20	(A)	17 to 20.
		(B)	[1] 14 to 16.
		(SStd)	[1] 0 to 13.
Defects	40	(A)	34 to 40.
		(B)	[1] 28 to 33.
		(SStd)	[1] 0 to 27.
Texture	20	(A)	17 to 20.
		(B)	[1] 14 to 16.
		(SStd)	[1] 0 to 13.
Total score	100		

Normal flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Tomato Sauce

SOURCE: 19 FR 2061, Apr. 9, 1954, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.2371 Product description.

Tomato sauce is the concentrated product prepared from the liquid extracted from mature, sound, whole tomatoes, the sound residue from preparing such tomatoes for canning, or the residue from partial extraction of juice, or any combination of these ingredients, to which is added salt and spices and to which may be added one or more nutritive sweetening ingredients, a vinegar or vinegars, and onion, garlic, or other vegetable flavoring ingredients. The refractive index of the tomato sauce at 20 degrees centigrade is not less than 1.3461.

[25 FR 10049, Oct. 21, 1960. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2372 Grades of tomato sauce.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of tomato sauce that possesses a good color; that possesses a good consistency; that is practically free from defects; that possesses a good flavor; that possesses a good finish; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of tomato sauce that possesses a fairly good color; that possesses a fairly good consistency; that is fairly free from defects; that possesses a fairly good flavor; that possesses a good finish; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of tomato sauce that fails to meet the requirements of "U.S. Grade C" or "U.S. Standard."

FILL OF CONTAINER

§ 52.2373 Recommended fill of container for tomato sauce.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of tomato sauce be filled as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the capacity of the container.

FACTORS OF QUALITY

§ 52.2374 Ascertaining the grade.

(a) The grade of tomato sauce is ascertained by considering the factor of finish, which is not scored, and the ratings for the factors of color, consistency, defects, and flavor, which are scored. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Color	25
Consistency	25
Defects	25
Flavor	25
Total score	100

(b) "Good finish" means that the product is evenly comminuted and has a uniform, smooth texture.

§ 52.2375 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "21 to 25 points" means 21, 22, 23, 24, and 25 points).

§ 52.2376 Color.

(a) *General.* The amount of red in the tomato sauce is determined by comparing the color of the product with that produced by spinning a combination of the following Munsell color discs:

Disc 1—Red (5R 2.6/13) (glossy finish).
Disc 2—Yellow (2.5YR 5/12) (glossy finish).
Disc 3—Black (N1) (glossy finish).
Disc 4—Gray (N4) (mat finish).

(b) *(A) classification.* Tomato sauce that possesses a good color may be given a score of 21 to 25 points. "Good color" means that the color is typical of tomato sauce made from well ripened red tomatoes and which has been properly prepared and properly processed. Such color contains as much or more red than that produced by spinning the specified Munsell color discs in the following combinations: 65 percent of the area of Disc 1; 21 percent of the area of Disc 2; 14 percent of the area of Disc 3 or of Disc 4, or 7 percent of the area of Disc 3, and 7 percent of the area of Disc 4, whichever most nearly matches the reflectance of the tomato sauce.

(c) *(C) classification.* If the tomato sauce possesses a fairly good color, a score of 17 to 20 points may be given.

Tomato sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the color is typical of tomato sauce and contains as much or more red than that produced by spinning the specified Munsell color discs in the following combinations: 53 percent of the area of Disc 1; 28 percent of the area of Disc 2; 19 percent of the area of either Disc 3 or 4, or 9½ percent of the area of Disc 3, and 9½ percent of the area of Disc 4, whichever most nearly matches the reflectance of the tomato sauce.

(d) (*SStd*) *classification.* Tomato sauce that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 16 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2377 Consistency.

(a) *General.* The factor of consistency refers to the viscosity of the product and the tendency to hold its liquid portion in suspension.

(b) (*A*) *classification.* Tomato sauce that possesses a good consistency may be given a score of 22 to 25 points. "Good consistency" means that the tomato sauce shows not more than a slight separation of free liquid when poured on a flat grading tray; is not excessively stiff; and flows not more than 14 centimeters in 30 seconds at 20 degrees Centigrade in the Bostwick consistometer.

(c) (*C*) *classification.* If the tomato sauce possesses a fairly good consistency, a score of 18 to 21 points may be given. Tomato sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good consistency" means that the tomato sauce may show a noticeable, but not excessive, separation of free liquid when poured on a flat grading tray; is not excessively stiff; and flows not more than 18 centimeters in 30 seconds at 20 degrees Centigrade in the Bostwick consistometer.

(d) (*SStd*) *classification.* Tomato sauce that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2378 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from defects, such as dark specks or scalelike particles, seeds, particles of seed, tomato peel, core material, or other similar substances. This factor is evaluated by observing a layer of the product on a smooth white, flat surface. Such layer is prepared by drawing a scraper with a clearance of 3/32 inch high by 7 inches long rapidly through the product in two horizontal planes so as to form an approximate square.

(b) (*A*) *classification.* Tomato sauce that is practically free from defects may be given a score of 21 to 25 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or eating quality of the product.

(c) (*C*) *classification.* If the tomato sauce is fairly free from defects, a score of 18 to 20 points may be given. Tomato sauce that falls into this classification shall not be scored above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present may be noticeable but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification.* Tomato sauce that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2379 Flavor.

(a) (*A*) *classification.* Tomato sauce that possesses a good flavor may be given a score of 21 to 25 points. "Good flavor" means a good, distinct flavor characteristic of good quality ingredients. Such flavor is free from scorching or any objectionable flavor of any kind.

(b) (*C*) *classification.* If the tomato sauce possesses only a fairly good flavor, a score of 17 to 20 points may be given. Tomato sauce that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means a flavor characteristic of the ingredients in which there may be slight traces of undesirable flavor, such as scorched, bitter, or astringent, but is free from objectionable or off-flavors of any kind.

(c) (*SStd*) *classification.* Tomato sauce that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 16 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2380 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2381 Score sheet for tomato sauce.

Type of container ....
Container size ....
Label..........
Net weight or volume..........
Refractive index ....
Vacuum readings..........

Factors			Score points
Color..........	25	(A)	21–25
		(C)	[1] 17–20
		(SStd)	[1] 0–16
Consistency..........	25	(A)	22–25
		(C)	[1] 18–21
		(SStd)	0–17
Defects..........	25	(A)	21-25
		(C)	[1] 18-20
		(SStd)	[1] 0-17
Flavor..........	25	(A)	21-25
		(C)	[1] 17-20
		(SStd)	[1] 0-16
Total score..........	100		

Good finish ....
Grade ....

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[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen French Fried Potatoes

SOURCE: 31 FR 6190, Apr. 22, 1966, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, LENGTHS, AND GRADES

§ 52.2391 Product description.

Frozen french fried potatoes are prepared from mature, sound, white or Irish potatoes (Solanum tuberosum). The potatoes are washed, sorted, and trimmed as necessary to assure a clean and wholesome product. The potatoes may or may not be cut into pieces. The potatoes are processed in accordance with good commercial practice which includes deep frying or blanching in a suitable fat or oil and which may include the addition of any ingredient permissible under the Federal Food, Drug, and Cosmetic Act. The prepared product is frozen and is stored at temperatures necessary for its preservation.

§ 52.2392 Fry color type.

(a) General: The term "fry color," as used in this subpart, refers to the color change which occurs in the potato units solely because of the frying process. Potato units may be designated as to "fry color" in accordance with USDA color standards for frozen french fried potatoes. (See § 52.2398 for further reference to these color standards.)

(b) The "fry color" of a sample unit may be designated in accordance with the following criterion:

Designation	Fry color of the units
Extra light	Lighter than USDA No. 1.
Light	Similar to USDA No. 1 color.
Medium light	Mostly similar to USDA No. 2. Predominantly lighter than No. 3 but may include No. 1.
Medium	Mostly similar to USDA No. 3. May include units of No. 4 and/or No. 2 fry color.
Dark	Predominantly darker than USDA No. 3. May include color No. 4 or darker.

§ 52.2392a Types.

(a) Frozen french fried potatoes are of two types, based principally on intended use, as follows:

(1) *Retail type.* This type is intended for household consumption. It is normally packed in small packages which are labeled or marked for retail sales. It may be otherwise designated for such use.

(2) *Institutional type.* This type is intended for the hotel, restaurant, or other large feeding establishment trade. Primary containers, usually 5 pounds or more, are often not completely labeled as for retail sales.

(b) If it is not possible to ascertain the type, the quality requirements of the retail type apply.

[32 FR 779, Jan. 24, 1967. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2393 Styles.

(a) *General.* The style of frozen french fried potatoes is identified by the general size, shape, or other physical characteristics of the potato units. Styles with cut units may be further identified by substyles as follows:

(1) "Straight cut" refers to smooth cut surfaces;

(2) "Crinkle cut" refers to corrugated cut surfaces.

(b) *Strips.* This style consists of elongated pieces of potato with practically parallel sides and of any cross-sectional shape. This style may be further identified by the approximate dimensions of the cross-section, for example:

¼ × ¼ inch,
⅜ × ⅜ inch,
½ × ¼ inch, or
⅜ × ¾ inch.

(1) "Shoestring" refers to strips, either straight cut or crinkle cut, with a cross-sectional area predominantly less than that of a square measuring 5/16 × 5/16 inch.

(c) *Slices.* This style consists of pieces of potato with two practically parallel sides, and which otherwise conform generally to the shape of the potato. This style may also contain a normal amount of outside slices.

(d) *Dices.* This style consists of pieces of potato cut into approximate cubes.

(e) *Rissole.* This style consists of whole or nearly whole potatoes.

(f) *Other.* Any other individually frozen french fried potato product may be designated as to style by description of the size, shape, or other characteristic which differentiates it from the other styles.

§ 52.2394 Length designations.

(a) *General.* The length designations described in this section apply to "strip" styles only.

(b) *Criteria for length designations of a sample unit.* Frozen french fried potato strips are designated as to length in accordance with the following criteria. "Percent," as used in this section, means the percent, by count, of all strips of potato that are ½-inch in length, or longer.

(1) *Extra long.* Eighty (80) percent or more are 2 inches in length or longer; and 30 percent or more are 3 inches in length or longer.

(2) *Long.* Seventy (70) percent or more are 2 inches in length, or longer; and 15 percent or more are 3 inches in length, or longer.

(3) *Medium.* Fifty (50) percent or more are 2 inches in length, or longer.

(4) *Short.* Less than 50 percent are 2 inches in length or longer.

(c) *Criteria for length designation of a lot.* (See § 52.2403 for these criteria.)

§ 52.2395 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen french fried potatoes, except "strip" style, "short" length, that: (1) Have a good flavor; (2) have a good color; (3) are practically uniform in size and symmetry; (4) are practically free from defects; (5) possess a good texture; and (6) score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade A (or 'U.S. Fancy') Short" is the quality of frozen french fried potatoes of "strip" style, "short" length that: (1) Have a good flavor; (2) have a good color; (3) are practically uniform in size and symmetry; (4) are practically free from defects; (5) possess a good texture; and (6) score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen french fried potatoes that: (1) Have a reasonably good flavor; (2) have a reasonably good color; (3) are reasonably uniform in size and symmetry; (4) are reasonably free from defects; (5) possess a reasonably good texture; and (6) score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the grade of frozen french fried potatoes that fail to meet the requirements of "U.S. Grade B."

FACTORS OF QUALITY

§ 52.2396 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of frozen french fried potatoes is ascertained by considering: The factor of flavor which is not scored; the ratings for the factors of color, uniformity of size and symmetry, defects, and texture which are scored; the total score; and the limiting rules which may be applicable.

(b) *Sample unit size.* For purposes of rating the quality factor sample units are established as follows:

(1) *Retail type.* One pound of product (16 ounces) selected from a production line or from one or more market packages.

(2) *Institutional type.* Two pounds of product (32 ounces) selected from a production line or from one market package.

(c) *Definitions of flavor.* (1) "Good flavor" means the good characteristic flavor and odor of properly prepared french fried potatoes. Such flavor is free from rancidity and bitterness, from pronounced scorched or caramelized flavors, and from off-flavors and off-odors of any kind.

(2) "Reasonably good flavor" means a flavor that may be somewhat lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(d) *Heating the product.* When heating is required in connection with evaluating the quality factors, the sample unit is heated in accordance with the manufacturer's directions or in a manner that will give equivalent results. In the absence of such directions the following methods are presecribed:

(1) *Oven method.* This method is used for products packaged, labeled, marked, or otherwise designated to indicate probable retail sales for household use.

(i) Place the product while still in the frozen state on a piece of crumpled and partially straightened aluminum foil of sufficient size so that at least 9 ounces of the product may be spread in a single layer on the foil. The aluminum foil may be supported by a piece of sheet metal or a shallow pan.

(ii) Place foil and frozen contents into a properly ventilated oven preheated to 425° F. and allow to remain 15 minutes or until the interior portions of the larger pieces are properly cooked.

(2) *Deep fat method.* This method is used for products which are prepared, packaged, labeled, or marked to indicate probable hotel, restaurant, or other feeding establishment use. Place the product in a suitable basket or rack and cook, by immersing in clean suitable fat or oil, at a temperature of about 365° F. for 1½ minutes or until the larger pieces are properly cooked.

(e) *Factors rated by score points.* The relative importance of each scoring factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	30
Uniformity of size and symmetry	20
Defects	20
Texture	30

Factors	Points
Total	100

[31 FR 6190, Apr. 22, 1966, as amended at 32 FR 779, Jan. 24, 1967. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2397 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example: "18 to 20 points" means 18, 19, or 20 points.)

§ 52.2398 Color.

(a) *General.* The color of the product is evaluated before complete defrosting but after any exterior frost has evaporated. After heating, adjustment in the scores may be made to reflect color variations due to heating. The color numbers refer to a color which is visually similar to the designated color in the USDA Color Standards for Frozen French Fried Potatoes. The Fry Color designations in this section are the same as those described in § 52.2392 *Fry color type.*

(b) *Availability of color standards.* The USDA Color Standard for frozen french fried potatoes cited in this subpart are official color standards which may be used also to classify the fry color of other cooked products. Information about these color standards, and their availability, may be obtained from:

Processed Products Standardization and Inspection Branch, Fruit, and Vegetable Division—AMS, U.S. Department of Agriculture, Washington, D.C., 20250.

(c) (*A*) *Classification.* Frozen french fried potatoes that have a good color may be given a score of 27 to 30 points. "Good color" means the bright, characteristic color of properly prepared frozen french fried potatoes. The fry color may be "Extra light," "Light," "Medium light," or "Medium" within the uniformity criterion in § 52.2392. After heating, the product is practically free from units which vary markedly from the criterion for the fry color of the units.

(d) (*B*) *Classification.* If the frozen french fried potatoes have a reasonably good color, a score of 24 to 26 points may be given. Frozen french fried potatoes that fall into this classification may not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means a characteristic frozen french fry potato color which may be dull but not off color. The fry color may be variable, exceeding the uniformity criterion of "Extra light," "Light," "Medium light," "Medium," or "Dark." After heating, however, the variation in the fry color of the units does not seriously affect the appearance of the product.

(e) (*SStd.*) *Classification.* Frozen french fried potatoes that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2399 Uniformity of size and symmetry.

(a) *General.* In strip styles, the uniformity of length of normal shaped strips is not considered under this section. Such variation is considered under § 52.2394. The following definitions apply to the specified styles:

(b) *Definitions*—(1) *Chip.* In all styles except "Dices," "chip" means a piece of potato that is less than ½ inch in its greatest direct dimension. A chip in Dices style is any piece of potato that is less than one-half the volume of a normal dice. Chips are not considered small pieces for the purposes of this section.

(2) *Small piece.* A "small piece" in strip styles, means a strip that is less than 1 inch in length.

(3) *Sliver.* A "sliver" in strip styles is a strip of substantially smaller average cross-section than the predominant size of the strips and which has less than one-third of the weight of an average unit of the same length.

(4) *Irregular pieces.* Irregular pieces, in all styles, means pieces of potato

that do not have the general conformation of the other units of the product.

(c) (*A*) *Classification.* Frozen french fried potatoes that are practically uniform in size and symmetry may be given a score of 18 to 20 points. "Practically uniform in size and symmetry" has the following meanings for the styles specified:

(1) *Strip styles.* (i) Any chips present no more than slightly detract from the appearance of the product; and

(ii) Of all the product units, except chips, not more than 15 percent, by count, may consist of small pieces, slivers, and/or irregular pieces.

(2) *All styles except strips.* Any chips present and/or any variation in the size and shape of the potato units may no more than slightly detract from the appearance of the product.

(d) (*B*) *Classification.* If the frozen french fried potatoes are only reasonably uniform in size and symmetry a score of 16 to 17 points may be given. Frozen french fried potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably uniform in size and symmetry" has the following meanings for the styles specified:

(1) *Strip styles.* (i) Any chips present may not seriously detract from the appearance of the product; and

(ii) Of all the product units, except "chips," not more than 30 percent, by count, may consist of small pieces, slivers, and/or irregular pieces.

(2) *All styles except strips.* Any chips present and/or any variation in the size and shape of the potato units may not seriously detract from the appearance of the product.

(e) (*SStd.*) *Classification.* Frozen french fried potatoes that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2400 Defects.

(a) *General.* This factor is concerned with imperfections in the product, such as necrosis, crushed units, discolored eyes, callous areas, and discolorations which affect its appearance or edibility.

(b) *Insignificant imperfections.* Imperfections which individually are of little consequence are not considered as defects for the purposes of these standards. Their effect, however, on the overall appearance or edibility of the product is considered. Among such insignificant imperfections are:

(1) Very light surface or internal discolorations of any size;

(2) Light brown surface or internal discolorations smaller in size than the area of a circle, or the volume of a sphere, of 3/16 inch diameter; and

(3) Dark brown surface or internal discolorations smaller in size than the area of a circle, or the volume of a sphere, of 1/8 inch diameter.

(c) *Minor defects.* Minor defects are imperfections which detract, but not seriously so, from the appearance or edibility of the product. Among such imperfections are:

(1) Light brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 3/16 inch diameter but smaller in size than the area of a circle, or the volume of a sphere, of 5/16 inch diameter; and

(2) Dark brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 1/8 inch diameter but smaller in size than the area of a circle, or the volume of a sphere, of 1/4 inch diameter.

(d) *Minor defective.* A minor defective is a unit of potato that is affected by one or more minor defects which detract, but not seriously so, from the appearance or edibility of the unit.

(e) *Major defects.* Major defects are imperfections of such a nature as to seriously detract from the appearance or edibility of the product. Among such imperfections are:

(1) Light brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 5/16 inch diameter;

(2) Dark brown surface or internal discolorations equal to or larger in size than the area of a circle, or the

volume of a sphere, of ¼ inch diameter; and

(3) Any condition of the potato which is offensive because of color, odor, character, or for any other reason.

(f) *Major defective.* A major defective is a unit of potato that is affected by one or more major defects or by any combination of major and/or minor defects so as to detract seriously from the appearance or edibility of the unit.

(g) (*A*) *Classification.* Frozen french fried potatoes that are practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means that:

(1) Any combination of defects present (including insignificant imperfections) may no more than slightly detract from the appearance or edibility of the product;

(2) Any carbon specks present may no more than slightly detract from the appearance of the product; and

(3) The minor and major defectives that may be present in the sample unit, do not exceed the allowances in Table I or Table II of this subpart.

(h) (*B*) *Classification.* If the frozen french fried potatoes are reasonably free from defects a score of 16 to 17 points may be given. Frozen french fried potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) Any combination of defects present (including insignificant imperfections) does not seriously detract from the appearance or edibility of the product;

(2) Any carbon specks present do not seriously detract from the appearance of the product; and

(3) The minor and major defectives that may be present in the sample unit, do not exceed the allowances in Table I or Table II of this subpart.

TABLE I—MAXIMUM ALLOWANCES FOR DEFECTIVES IN ALL STYLES EXCEPT SHOESTRING STYLE STRIPS AND DICES

Grade classification	Type of defects	Retail type—defectives in a 1-lb. sample unit	Institutional type—defectives in a 2-lb. sample unit
A and A short	Minor and major	5 defectives	18 defectives.
	Limit for major	1 defective	4 defectives.
B	Minor and major	9 defectives	28 defectives.
	Limit for major	2 defectives	8 defectives.

TABLE II—MAXIMUM ALLOWANCES FOR DEFECTIVES IN SHOESTRING STYLE STRIPS AND DICES

Grade classification	Type of defects	Retail type—defectives in a 1-lb. sample unit	Institutional type—defectives in a 2-lb. sample unit
A and A short	Minor and major	9 defectives	28 defectives.
	Limit for major	2 defectives	8 defectives.
B	Minor and major	18 defectives	36 defectives.
	Limit for major	5 defectives	12 defectives.

(i) (*SStd.*) *Classification.* Frozen french fried potatoes that fail to meet the requirements of paragraph (h) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[31 FR 6190, Apr. 22, 1966, as amended at 32 FR 779, Jan. 24, 1967. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2401 Texture.

(a) *General.* The factor of texture is evaluated within 3 minutes after the product has been heated as specified, and while it is well above room temperature.

(b) (*A*) *Classification.* Prepared french fried potatoes that possess a good texture may be given a score of 27 to 30 points. "Good texture" means that the external surfaces of the units are moderately crisp, show no noticeable separation from the inner portion, and are not excessively oily; the interior portions are well cooked, tender, and practically free from sogginess; except that shoestring style strips and dices may be moderately crisp throughout.

(c) (*B*) *Classification.* If the prepared french fried potatoes possess only a reasonably good texture a score of 24 to 26 points may be given. Frozen french fried potatoes that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably good texture" means that the external surfaces of the units may be slightly hard or slightly tough, show no more than a moderate separation from the interior portion, and are not excessively oily; the interior portions are well cooked, reasonably tender, and reasonably free from sogginess.

(d) (*SStd.*) *Classification.* Frozen french fried potatoes that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

LOT COMPLIANCE

§ 52.2402 Ascertaining the grade of a lot.

The grade of a lot of frozen french fried potatoes covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

§ 52.2403 Ascertaining the length designation of a lot.

(a) This section applies to strip styles only.

(b) A lot of frozen french fried potato strips may be given a single length designation when the sample units representing the lot comply with the plan outlined in paragraph (c) of this section, in that: (1) Any number of sample units, indicated by "X", are of the designated length and/or a longer length designation; and (2) the number of sample units indicated by "D", does not exceed the acceptance number for the sample size in the sampling plan contained in this section.

(c) Plan for ascertaining the length designation of a lot:

Length designation for the lot	Individual sample units of each designation permitted [1]			
	Extra long	Long	Medium	Short
Extra long	X	D	None	None
Long	X	X	D	None
Medium	X	X	X	D
Short	D	X	X	X more than D

[1] Indicates limiting rule.

"X" means any number of sample units within the sample size.

"D" means the number of sample units indicated by the acceptance number for the sample size in the single sampling pl in this section.

"X more than D" means any number of sample units within the single sampling plan which is larger than the acceptanc number for the sample size.

(d) Single sampling plan:

Sample size	6	13	21	29	38	48	60	72
Acceptance No	1	2	3	4	5	6	7	8

EXPLANATION OF TERMS

§ 52.2404 Equivalents.

The following approximate equivalents may be used in connection with the numercial values used in this subpart:

1 inch = 25.4 mm.
2 inch = 50.8 mm.
3 inch = 76.2 mm.

¼ inch = 6.4 mm.
⅛ inch = 3.2 mm.
3/16 inch = 4.8 mm.
5/16 inch = 7.9 mm.
1 pound = 0.45 kg.
425° F. = 218° C.
365° F. = 185° C.

SCORE SHEET

§ 52.2405 Score sheet for frozen french fried potatoes.

Size and kind of container
Container mark or identification
Label
Net weight (ounces)
Style and Cross-sectional dimension
Type
Length

Factors		Score points	
Color	30	(A)	27-30
		(A) short	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Uniformity of size and symmetry	20	(A)	18-20
		(A) short	18-20
		(B)	[1] 16-17
		(SStd.)	[1] 0-15
Defects	20	(A)	18-20
		(A) short	18-20
		(B)	[1] 16-17
		(SStd.)	[1] 0-15
Texture	30	(A)	27-30
		(A) short	27-30
		(B)	[1] 24-26
		(SStd.)	[1] 0-23
Total score	100		

Flavor
Grade

[1] indicates limiting rule.

Subpart—United States Standards for Grades of Peeled Potatoes

SOURCE: 19 FR 2647, May 8, 1954, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2421 Product description.

"Peeled potatoes" are clean, sound, fresh tubers of the potato plant prepared by washing, peeling, trimming, sorting, and by proper treatment, to prevent discoloration, by any means permissible under the provisions of the Federal Food, Drug, and Cosmetic Act. The product is properly packed in suitable containers and securely closed to maintain the product in a sanitary condition.

[51 FR 21133, June 11, 1986]

§ 52.2422 Styles of peeled potatoes.

(a) "Whole" means peeled potatoes consisting of whole potatoes that retain the approximate original conformation of the whole potato.

(b) "Whole and cut" means peeled potatoes consisting of not less than 50 percent, by weight, of whole potatoes and the remainder cut into pieces.

(c) "Cut and whole" means peeled potatoes consisting of less than 50 percent, by weight, of whole potatoes, and the remainder cut into pieces.

(d) "Sliced" means peeled potatoes consisting of potato slices of practically uniform thickness with parallel surfaces.

(e) "Diced" means peeled potatoes consisting of cubed potatoes.

(f) "French style" or "shoestring" means peeled potatoes consisting of strips of potatoes.

(g) "Cut" means peeled potatoes cut into pieces which do not conform to any of the foregoing styles.

§ 52.2423 Grades of peeled potatoes.

(a) "U.S. Grade A" is the quality of peeled potatoes that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a good color; that are practically free from defects; that possess a good texture; that are practically uniform in size; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points: *Provided*, That the peeled potatoes may be reasonably uniform in size, if the total score is not less than 85 points.

(b) "U.S. Grade B" is the quality of peeled potatoes that may or may not possess similar varietal characteristics; that possess a normal flavor and odor; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably good texture; that are reasonably uniform in size; and that score not less than 70 points when scored in accordance with

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the scoring system outlined in this subpart.

(c) "Substandard" is the quality of peeled potatoes that fail to meet the requirements of U.S. Grade B.

[19 FR 2647, May 8, 1954. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 21133, June 11, 1986]

SIZES

§ 52.2424 Size of peeled whole and peeled whole and cut potatoes.

(a) The size of a round or intermediate shaped whole potato is determined by measuring the largest diameter at right angles to its longitudinal axis.

(b) The size of long varieties and whole and cut potatoes is determined by weighing.

§ 52.2425 Size of potato slices in sliced potatoes.

The size of any slice in sliced potatoes is determined by measuring the smallest diameter of the largest surface of the slice.

FACTORS OF QUALITY

§ 52.2426 Ascertaining the grade.

(a) The grade of peeled potatoes may be ascertained by considering the requirements with respect to varietal characteristics, flavor, and odor, which are not scored and the factors of color, uniformity of size, defects, and texture, which are scored.

(b) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	20
Uniformity of size	20
Defects	40
Texture	20
Total score	100

(c) The factors of flavor and odor, color, and texture are ascertained both before and after the product is cooked.

(d) "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.2427 Ascertaining the rating of the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2428 Color.

(a) (*A*) *classification*. Peeled potatoes that possess a good color may be given a score of 17 to 20 points. "Good color" means that the peeled potatoes are free from oxidation and possess a practically uniform, typical color of peeled potatoes of similar varietal characteristics, and when cooked until tender the potatoes show no appreciable discoloration as a result of cooking.

(b) (*B*) *classification*. If the peeled potatoes possess a reasonably good color, a score of 14 to 16 points may be given. Peeled potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the peeled potatoes possess a reasonably uniform color; the color of the units, individually or collectively, may be variable, dull, slightly oxidized, or otherwise discolored but not to the extent that the appearance is materially affected. When cooked until tender, the potatoes show no material discoloration as a result of cooking.

(c) (*SStd*) *classification*. Peeled potatoes that for any reason fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[19 FR 2647, May 8, 1954. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 21133, June 11, 1986]

§ 52.2429 Uniformity of size.

(a) (*A*) *classification.* Peeled potatoes that are practically uniform in size many be given a score of 17 to 20 points. "Practically uniform in size" has the following meanings with respect to the various styles of peeled potatoes:

(1) *Whole.* The potatoes are not less than 1½ inches in diameter and at least 40 percent of long varieties are 4¾ ounces in weight or larger and 60 percent of round or intermediate varieties are 2⅛ inches or more in diameter.

(2) *Whole and cut potatoes.* The whole potatoes are not less than 1½ inches in diameter, and the largest unit is not more than five times the weight of the smallest unit.

(3) *Cut and whole potatoes.* The whole potatoes are not less than 1½ inches in diameter and the largest unit is not more than five times the weight of the smallest unit.

(4) *Sliced potatoes.* In 90 percent of the slices of the most uniform diameter the diameter of the largest slice is not more than twice the diameter of the smallest slice and are not less than 1½ inches in diameter.

(5) *Diced potatoes.* The units are practically uniform in size, and the aggregate weight of the units which are smaller than one-half of the predominant size of the cubes and of all large and irregular units does not exceed 20 percent of the weight of all the units.

(6) *French style or shoestring.* The strips of potatoes are practically uniform in size, and the aggregate weight of all the strips less than 1 inch in length and strips of substantially smaller cross section than the predominant size of strips does not exceed 15 percent of the weight of all the strips.

(7) *Cut.* The largest unit is not more than five times the weight of the smallest unit and not more than 25 percent, by weight, of individual units weigh less than ½ ounce each.

(b) (*B*) *classification.* If the peeled potatoes are reasonably uniform in size, a score of 14 to 16 points may be given "Reasonably uniform in size" has the following meanings with respect to the various styles of peeled potatoes:

(1) *Whole.* The potatoes may vary considerably in size and are not less than 1½ inches in diameter.

(2) *Whole and cut potatoes.* The units may vary considerably in size and the largest unit is not more than six times the weight of the smallest unit.

(3) *Cut and whole potatoes.* The units may vary considerably in size and the largest unit is not more than six times the weight of the smallest unit.

(4) *Sliced potatoes.* In 90 percent of the slices of the most uniform diameter the diameter of the largest slice is not more than three times the diameter of the smallest slice and the smallest slice is not less than 1½ inches in diameter.

(5) *Diced potatoes.* The units are reasonably uniform in size and the aggregate weight of the units which are smaller than one-half of the predominant size of the cubes and of all large and irregular units does not exceed 30 percent of the weight of all the units.

(6) *French style or shoestring.* The strips of potatoes are reasonably uniform in size, and the aggregate weight of all strips less than 1 inch in length and strips of substantially smaller cross section that the predominant size of strips does not exceed 25 percent of the weight of all the strips.

(7) *Cut.* The units may vary considerably in size and not more than 50 percent, by weight, of individual units weigh less than ½ ounce each.

(c) (*SStd*) *classification.* Peeled potatoes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2430 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from peel, blemished units, and mechanical damage.

(1) "Blemished" means units affected by brown or black internal or external discoloration, discolored or unpeeled eyes, sunburn, or units blemished by other means to such an

extent that the appearance or eating quality of the unit is materially affected.

(2) "Seriously blemished" means any unit blemished to such an extent that the appearance or eating quality of the unit is seriously affected.

(3) "Mechanical damage" means crushed units or units affected by frayed surfaces and frayed edges and knife marks or trimming or units mechanically damaged by other means to such an extent that the appearance or eating quality of the unit is seriously affected.

(b) (*A*) *classification*. Peeled potatoes that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that there may be present not more than:

(1) 10 percent, by weight, of units affected by mechanical damage;

(2) 2 percent, by weight, of blemished units: *Provided*, That not more than 1 percent, by weight, of all the units may consist of seriously blemished units; and that

(3) Peel, blemished units, seriously blemished units, and units affected by mechanical damage, individually or collectively, do not materially affect the appearance or eating quality of the product.

(c) (*B*) *classification*. If the peeled potatoes are reasonably free from defects, a score of 28 to 33 points may be given. Peeled potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present not more than:

(1) 20 percent, by weight, of units affected by mechanical damage;

(2) 4 percent, by weight, of blemished units: *Provided*, That not more than 2 percent, by weight, of all the units may consist of seriously blemished units; and that

(3) Peeled, blemished units, seriously blemished units, and units affected by mechanical damage, individually or collectively, do not seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *classification*. Peeled potatoes that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[19 FR 2647, May 8, 1954. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 21133, June 11, 1986]

§ 52.2431 Texture.

(a) (*A*) *classification*. Peeled potatoes that possess a good texture may be given a score of 17 to 20 points. "Good texture" means that the units are fairly firm and typical of properly prepared fresh potatoes. The peeled potatoes are practically free from tough outer surfaces.

(b) (*B*) *classification*. If the peeled potatoes possess a reasonably good texture, a score of 14 to 16 points may be given. Peeled potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good texture" means that the units may be not more than slightly flabby, and are reasonably free from tough outer surfaces.

(c) (*SStd*) *classification*. Peeled potatoes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[19 FR 2647, May 8, 1954. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981, and amended at 51 FR 21134, June 11, 1986]

LOT INSPECTION AND CERTIFICATION

§ 52.2432 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2433 Score sheet for peeled potatoes.

Size and kind of container
Container mark or identification
Label
Net weight (in pounds)
Style
Size of whole or whole and cut potatoes (diameter or weight)
Size of sliced potatoes (diameter)

Factors	Score points		
Color	20	(A)	17–20
		(B)	[1] 14–16
		(SStd)	[1] 0–13
Uniformity of size	20	(A)	17–20
		(B)	14–16
		(SStd)	[1] 0–13
Defects	40	(A)	34–40
		(B)	[1] 28–33
		(SStd)	[1] 0–27
Texture	20	(A)	17–20
		(B)	[1] 14–16
		(SStd)	[1] 0–13
Total score	100		

Normal flavor and odor
Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Concentrated Sweetened Grape Juice

SOURCE: 22 FR 6077, Aug. 2, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.2451 Product description.

Frozen concentrated sweetened grape juice is prepared from unfermented single-strength grape juice from sound properly mature fresh grapes which, with or without aging, or depectinization, is then concentrated. Single-strength grape juice or natural grape essence or a combination of single-strength grape juice and natural grape essence may be mixed to the concentrate and packed with the addition of nutritive sweetening ingredient and with or without ascorbic acid. Edible fruit acid may be added to adjust the flavor. The product is then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.2452 Types of frozen concentrated sweetened grape juice.

(a) *Type I.* Frozen concentrated sweetened grape juice prepared from grapes of the slip-skin varieties of the Concord type of the Labrusca species. Not less than 50 percent of the total soluble solids of the finished concentrate shall be derived from the grapes.

(b) *Type II.* Frozen concentrated sweetened grape juice prepared from a mixture of Type I with one or more varieties other than Type I. Not less than 50 percent of the total soluble solids of the finished concentrate shall be derived from the grapes, of which, not less than one-half shall be derived from Type I grapes.

§ 52.2453 Styles of frozen concentrated sweetened grape juice.

Brix value of the finished concentrate (including added sweetening ingredient) shall be not less than the following for the respective dilution factor of frozen concentrated sweetened grape juice:

Dilution factor	Minimum Brix value of finished concentrate including added sweetening ingredient (degrees)
1 plus 1	24.8
1 plus 2	35.5
1 plus 3	45.4
1 plus 4	54.5
1 plus 5	62.8
1 plus 6	70.7

§ 52.2454 Grades of frozen concentrated sweetened grape juice.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen concentrated sweetened grape juice which reconstitutes properly and of which the reconstituted product possesses a good color; is practically free from defects;

possesses a good flavor; and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen concentrated sweetened grape juice which reconstitutes properly and of which the reconstituted product possesses a reasonably good color; is reasonably free from defects; possesses a reasonably good flavor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen concentrated sweetened grape juice that fails to meet the requirements of U.S. Grade B or U.S. Choice.

FILL OF CONTAINER

§ 52.2455 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such is not a factor of quality for the purpose of these grades. It is recommended that the container be filled with frozen concentrated sweetened grape juice as full as practicable without impairment of quality.

FACTORS OF QUALITY

§ 52.2456 Ascertaining the grade.

(a) The grade of frozen concentrated sweetened grape juice is ascertained by considering the factors of quality which are not scored and those which are scored as follows:

(1) *Factors which are not scored.* Ease of mixing into grape juice beverage.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Defects	20
Flavor	40
Total score	100

(b) The scores for the factors of color, defects, and flavor are determined immediately after the grape juice beverage has been prepared by thoroughly mixing the frozen concentrate with a specific volume of water as directed by the manufacturer.

§ 52.2457 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, or 20 points.)

§ 52.2458 Color.

(a) (*A*) *classification.* Frozen concentrated sweetened grape juice of which the prepared grape juice beverage possesses a good color may be given a score of 34 to 40 points. "Good color" has the following meanings with respect to the types of frozen concentrated sweetened grape juice.

(1) *Type I.* A bright reddish-purple color characteristic of a grape juice beverage properly prepared from Concord type grape juice and, in addition, the grape juice beverage prepared conforms to the following requirements:

Minimum absorbancy at 520 millimicrons	[1] 4.0
Minimum absorbancy ratio	[1] 1.5

[1] Determined according to instructions in § 52.2462.

(2) *Type II.* A bright color characteristic of a grape juice beverage properly prepared from Type I juice and from varietal type or varietal types of juice other than Type I and, in addition, the grape juice beverage prepared conforms to the following requirements:

Minimum absorbancy at 520 millimicrons	[1] 4.0
Minimum absorbancy ratio	[1] 1.5

[1] Determined according to instructions in § 52.2462.

(b) (*B*) *classification.* If the prepared grape juice beverage possesses a reasonably good color a score of 28 to 33 points may be given. Frozen concentrated sweetened grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" has the following meanings with respect to the types of frozen concentrated sweetened grape juice:

(1) *Type I.* A reddish-purple color characteristic of a grape juice beverage prepared from Concord type grape juice and which color may be slightly dull but which is not off color for any reason.

(2) *Type II.* A color that reflects to a reasonably extent the appearance characteristic of a grape juice beverage prepared from Type I juice and from any varietal type or varietal types of juice other than Type I and which color may be slightly dull but not off color for any reason.

(c) (*SStd*) *classification.* Frozen concentrated sweetened grape juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2459 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from sediment and other residue, from tartrate crystals, from particles of skin, particles of seed, and from other defects.

(b) (*A*) *classification.* Frozen concentrated sweetened grape juice of which the prepared grape juice beverage is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that there may be present not more than a slight amount of sediment and residue; is practically free from tartrate crystals; and is free from particles of skin, particles of seed, and from other defects.

(c) (*B*) *classification.* If the prepared grape juice beverage is reasonably free from defects a score of 14 to 16 points may be given. Frozen concentrated sweetened grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule) "Reasonably free from defects" means that there may be present not more than a moderate amount of sediment and residue; may possess a slight amount of tartrate crystals; may possess not more than a trace of particles of skin, particles of seed, and other defects.

(d) (*SStd*) *classification.* If the prepared grape juice beverage fails to meet the requirements of paragraph (c) of this section a score of 0 to 13 points may be given. Frozen concentrated sweetened grape juice that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2460 Flavor.

(a) (*A*) *classification.* Frozen concentrated sweetened grape juice of which the prepared grape juice beverage possesses a good flavor may be given a score of 34 to 40 points. "Good flavor" means that the flavor is a fine distinct and normal flavor, typical of well-matured grapes for the variety or varieties and is free from any objectionable flavors and objectionable odors of any kind. To score in this classification the prepared grape juice beverage and concentrate shall meet the following additional requirements:

BEVERAGE

(1) *Type I. Brix*—not less than 13.0 degrees.

Acid—not less than 0.40 gram per 100 milliliters nor more than 0.65 gram per 100 ml., calculated as tartaric acid.

Brix-acid ratio—the ratio of Brix value to acid is not less than 20 to 1 nor more than 14 to 1.

CONCENTRATE

Methyl anthranilate[1] (naturally occurring)—not less than the following for the respective dilution factor of frozen concentrated sweetened grape juice.

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[1] Determined according to instructions in § 52.2462.

Dilution factor	Methyl anthranilate (naturally occurring) (mg./l.)
1 plus 1	0.4
1 plus 2	.8
1 plus 3	1.2
1 plus 4	1.6
1 plus 5	1.6
1 plus 6	1.6

BEVERAGE

(2) *Type II. Brix*—not less than 13.0 degrees.

Acid—not less than 0.40 gram per 100 milliliters nor more than 0.65 gram per 100 ml., calculated as tartaric acid.

Brix-acid ratio—the ratio of Brix value to acid is not less than 20 to 1 nor more than 34 to 1.

CONCENTRATE

Methyl anthranilate[1] (naturally occurring)—not less than the following for the respective dilution factor of frozen concentrated sweetened grape juice.

Dilution factor	Minimum methyl anthranilate (naturally occurring) (mg./l.)
1 plus 1	0.2
1 plus 2	.4
1 plus 3	.6
1 plus 4	.8
1 plus 5	.8
1 plus 6	.8

(b) (*B*) *classification.* If the prepared grape juice beverage possesses a reasonably good flavor a score of 28 to 33 points may be given. Frozen concentrated sweetened grape juice that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor" means a reasonably typical flavor of reasonably well matured grapes for the varietal type or varietal types and is free from objectionable flavors and objectionable odors of any kind. To score in this classification the prepared grape juice beverage shall meet the following additional requirements:

(1) *Type I. Brix*—not less than 13.0 degrees.

Acid—not less than 0.30 gram per 100 milliliters nor more than 0.65 gram per 100 milliliters, calculated as tartaric acid.

Brix-acid ratio—the ratio of Brix value to acid is not less than 18 to 1 nor more than 36 to 1.

(2) *Type II. Brix*—not less than 13.0 degrees.

Acid—not less than 0.30 gram per 100 milliliters nor more than 0.65 gram per 100 milliliters, calculated as tartaric acid.

Brix-acid ratio—the ratio of Brix value to acid is not less than 18 to 1 nor more than 36 to 1.

(c) (*SStd.*) *classification.* If the frozen concentrated sweetened grape juice fails to meet the requirements of paragraph (b) of this section a score of 0 to 27 points may be given. Frozen concentrated sweetened grape juice that falls into this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSIS

§ 52.2461 Definition of terms used in these standards.

(a) "Brix" means the degrees Brix of the reconstituted grape juice beverage when tested with a Brix hydrometer calibrated at 20 degrees C. (68 degrees F.). If used in testing grape juice beverage as a temperature other than 20 degrees C. (68 degrees F.), the applicable temperature correction shall be made to the reading of the scale as prescribed in "Official Methods of Analysis of the Association of Official Agricultural Chemists."[2] The degrees Brix of grape juice beverage may be determined by any other method which gives equivalent results.

(b) "Acid" means the grams of acid (calculated as tartaric acid) per 100 milliliters of the reconstituted grape juice beverage determined by titration with standard sodium hydroxide solution using phenolphthalein as an indicator.

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[2] Copies of this publication are available for inspection in the Office of the Chief Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

(c) "Brix-acid ratio" means the ratio between the degrees Brix as determined in this section and the acid in grams per 100 milliliters of reconstituted grape juice beverage.

(d) "Dilution factor" is the ratio of the volumes of water to the volume of concentrate. This factor is provided by the manufacturer's directions for preparing the desired grape juice beverage (i.e., 3 plus 1 implies 3 volumes of water to one volume of concentrate).

(e) "Absorbancy ratio" means the ratio of absorbancy reading at 520 millimicrons to the absorbancy reading at 430 millimicrons.

§ 52.2462 Methods of analysis.

(a) *Methyl anthranilate*—(1) *Reagents.* (i) Hydrochloric acid—dilute 81 milliliters (ml.) of HCL to 100 ml. with H_2O.

(ii) Sodium nitrite solution—dissolve 3 grams (gm.) of $NaNO_2$ in 200 ml. of H_2O.

(iii) Hydrazine sulfate solution—dissolve 5 gm. of N_2H_4 H_2SO_4 in 200 ml. of H_2O.

(iv) Sodium carbonate solution—dissolve 50 gm. of Na_2CO_3 in 150 ml. of H_2O.

(v) Sodium-a-naphthol-2-sulfonate solution—dissolve 4.7 gm. of the sulfonate in 100 ml. of H_2O.

(vi) Standard solution of methyl anthranilate—dissolve 0.25 gm. of methyl anthranilate in 60 ml. of 95 percent ethyl alcohol and dilute with H_2O to 500 ml.

(2) *Apparatus.* Kjeldahl distillation apparatus and steam generator recommended by committee on micro-chemical apparatus, Div. Anal. Chem., A.C.S. Illustrated 8th Edition, 1955, fig. 77 and 78, A.O.A.C. or equals may be used.

(3) *Standard curve.* (i) Dilute 20 ml of standard solution of methyl anthranilate to 1 liter with H_2O (equivalent to 10 micrograms per ml.).

(ii) Prepare series of solution for standard curve by transferring 0-5 ml. of solution (i) into 100 ml. volumetric flask. Dilute to ca. 80 ml. with H_2O.

(iii) Then add as follows:

(*a*) 1 ml. HCl and 1 ml. sodium nitrite solution. Invert flask and let stand 2 minutes.

(*b*) 3 ml. hydrazine sulfate solution. Invert flask and let stand 1 minute.

(*c*) 2 ml. sodium-a-naphthol-2-sulfonate solution. Invert flask.

(*d*) Immediately add 3 ml. sodium carbonate solution, dilute to 100 ml. volume with H_2O,let stand 10 minutes.

(*e*) Adjust and maintain temperature of solution at 25° ± 1° C.

(*f*) Read absorbancy at 490 millimicrons, in a spectrophotometer or colorimeter, against a blank, carried through entire procedure, set at zero absorbancy.

(iv) Plot standard curve of concentration (microgram per 100 ml. of final solution) of methyl anthranilate against absorbancy of standard solutions.

(4) *Determination.* Use a 100 ml. volumetric flask as receiver. Add 5 ml. of water to just cover or seal end of extended condenser tube. Transfer 15-25 ml. of sample concentrate into distillation flask. Collect about (ca.) 80 ml. of distillate. Treat as under paragraph (a)(3)(iii) of this section. Obtain concentration (micrograms/100 ml. of final solution) of methyl anthranilate from standard curve (see paragraph (a)(3)(iv) of this section).

Methyl anthranilate (mg./liter)
=micrograms per 100 ml. of final solution/ml. of concentrate sample

(b) *Absorbancy and absorbancy ratio.* Absorbancy and absorbancy ratio shall be obtained as follows:

(1) The concentrate shall be reconstituted as for beverage purposes at 25 degrees C., using MacIlavaine's pH 3.2 buffer as the diluent. (The MacIlavaine's buffer should be absolutely clear and show no turbidity whatsoever.)

(2) 5 ml. aliquot of reconstituted sample (1) shall be further diluted to 100 ml. with MacIlavaine's pH 3.2 buffer.

(3) Filter 50 ml. of solution (2) through sintered glass crucible 4-cm. diameter, 4.5-cm. height, medium porosity.

(4) Read absorbancy of filtrate on a spectrophotometer at 520 millimicron wavelength with a 0.025 mm. width slit and at 430 millimicron wavelength with a 0.05 mm. width slit.

Absorbancy = 2 − log *T*, where *T* = percentage transmittancy

Corrected absorbancy = observed absorbancy × 20/thickness of cell (in cm.)

Absorbancy ratio = corrected absorbancy at 520 millimicrons/corrected absorbancy at 430 millimicrons

LOT INSPECTION AND CERTIFICATION

§ 52.2463 Ascertaining the grade of a lot.

The grade of a lot of frozen concentrated sweetened grape juice covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.2464 Score sheet for frozen concentrated sweetened grape juice.

Size and kind of container ....

Container mark or identification ....

Label (including dilution factor) ....

Net contents (fluid ounces) ....

Type (Concord, blended) ....

Brix of the reconst. beverage ....

Acid (as tartaric) (gram/100 ml.) ....

Brix-acid ratio ....

Factors		Score points	
Color	40	(A)	34–40
		(B)	[1] 28–33
		(SStd.)	[1] 0–27
Defects	20	(A)	17–20
		(B)	[1] 14–16
		(SStd.)	[1] 0–13
Flavor	40	(A)	34–40
		(B)	[1] 28–33
		(SStd.)	[1] 0–27
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Dried Apples

SOURCE: 20 FR 7095, Sept. 22, 1955; 20 FR 7525, Oct. 8, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2481 Product description.

Dried apples are prepared from sound, properly ripened fruit of the common apple (Malus pumila) by washing, sorting, trimming, peeling, coring, and cutting into segments. The prepared apple segments are properly dried to remove the greater portion of moisture to produce a semi-dry texture. The product may be sulfured sufficiently to retard discoloration. The dried apples are sorted or cleaned, or both, to assure a clean, sound, wholesome product.

§ 52.2482 Styles of dried apples.

(a) *Pie pieces.* Pie pieces consist predominantly of irregularly shaped segments of approximate parallel thickness.

(b) *Slices (or rings).* Slices (or rings) consist predominantly of circular sections or partial circular sections with open or solid centers, cut at approximate right angles to the core and of approximate parallel thickness.

(c) *Wedges.* Wedges consist predominantly of sectors cut longitudinally and radially from the core.

(d) *Cuts.* Cuts consist of dried apple segments of irregular shapes or irregular thicknesses, or both, which are not predominantly of a single style of pie pieces, slices (or rings), or wedges.

§ 52.2483 Grades of dried apples.

(a) "U.S. Grade A" or "U.S. Fancy" dried apples is the quality of dried apples in the style of pie pieces, slices (or rings), or wedges in which the moisture content of the finished product is not more than 24 percent by weight, that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a good color, that are practically uniform in size, that are practically free from defects, and that possess a good texture.

(b) "U.S. Grade B" or "U.S. Choice" dried apples is the quality of dried apples in the style of pie pieces, slices (or rings), or wedges in which the moisture content of the finished product is not more than 24 percent by weight, that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a reasonably good color, that are reasonably uniform in size, that are reasonably free from defects, and that possess a reasonably good texture.

(c) "U.S. Grade C" or "U.S. Standard" dried apples is the quality of dried apples in the style of pie pieces, slices (or rings), wedges, or cuts in which the moisture content of the finished product is not more than 24 percent by weight, that may possess dissimilar varietal characteristics, that possess a normal flavor and odor, that possess a fairly good color; that are fairly uniform in size, except for cut style; that are fairly free from defects, and that possess a fairly good texture.

(d) "Substandard" dried apples is the quality of dried apples that fail to meet the requirements of U.S. Grade C or U.S. Standard.

DEFINITIONS OF TERMS

§ 52.2484 Definitions of colors.

(a) *Good color.* "Good color" means that the dried apples possess a practically uniform bright, light yellow to white color, or other practically uniform bright characteristic color.

(b) *Reasonably good color.* "Reasonably good color" means that the dried apples possess a reasonably uniform and reasonably bright yellow to white color, or other reasonably uniform and reasonably bright characteristic color.

(c) *Fairly good color.* "Fairly good color" means that the dried apples possess a yellow to white color or other characteristic color that may be variable but not so variable or dark as to materially affect the appearance, edibility, or keeping quality of the product.

§ 52.2485 Definitions of uniformity of size.

(a) *General.* Uniformity of size is applicable to those styles that are predominantly of the styles of pie pieces, slices (or rings), or wedges and does not apply to the style of cuts.

(b) *Definition of a whole ring.* A "whole" ring is a circular section which may possess an open or solid center and such a ring with an open center may be cut or broken in one place to the open center.

(c) *Definition of a practically whole ring.* A "practically whole" ring is a partial circular section, with either open or solid center, and in which at least three-fourths of the apparent whole circular section remains.

(d) *Practically uniform in size.* "Practically uniform in size" has the following meanings for the respective styles:

(1) *Pie pieces.* (i) Practically all of the units are approximately 1/16 inch to no more than approximately ¼ inch in their greatest thickness;

(ii) Not less than 85 percent, by weight, of all the units are 1 inch or more in their longest dimension; and

(iii) Not more than 2 percent, by weight, of all the units may be so small as to pass readily through 5/16 inch square openings.

(2) *Slices (or rings).* (i) Practically all of the units are no more than approximately ¼ inch in their greatest thickness;

(ii) Not less than 75 percent, by weight, of all the units are whole and practically whole rings; and

(iii) Not less than 75 percent, by weight, of all the units are 1¼ inches or more in their longest dimension.

(3) *Wedges.* (i) Not less than 90 percent, by weight, of all the units are 1¼ inches or more in their longest dimension and the greatest thicknesses of such units do not vary more than ¼ inch.

(e) *Reasonably uniform in size.* "Reasonably uniform in size" has the following meanings for the respective styles:

(1) *Pie pieces.* (i) Practically all of the units are approximately 1/16 inch to no more than approximately ¼ inch in their greatest thickness;

(ii) Not less than 60 percent, by weight, of all the units are 1 inch or more in their longest dimension; and

(iii) Not more than 6 percent, by weight, of all the units may be so small as to pass readily through 5/16 inch square openings.

(2) *Slices (or rings).* (i) Practically all of the units are no more than approximately ¼ inch in their greatest thickness;

(ii) Not less than 60 percent, by weight, of all the units are whole and practically whole rings; and

(iii) Not less than 60 percent, by weight, of all the units are 1¼ inches or more in their longest dimension.

(3) *Wedges.* (i) Not less than 75 percent, by weight, of all the units are 1¼ inches or more in their longest dimension and the greatest thicknesses of such units do not vary more than ¼ inch.

(f) *Fairly uniform in size.* "Fairly uniform in size" has the following meanings for the respective styles:

(1) *Pie pieces.* (i) Practically all of the units are approximately 1/16 inch to no more than approximately 5/16 inch in their greatest thickness;

(ii) Not less than 40 percent, by weight, of all the units are 1 inch or more in their longest dimension; and

(iii) Not more than 10 percent, by weight, of all the units may be so small as to pass readily through 5/16 inch square openings.

(2) *Slices (or rings).* (i) Practically all of the units are no more than approximately 5/16 inch in their greatest thickness;

(ii) Not less than 40 percent by weight of all the units are whole and practically whole rings; and

(iii) Not less than 40 percent by weight of all the units are 1¼ inches or more in their longest dimension.

(3) *Wedges.* (i) Not less than 50 percent by weight of all the units are 1¼ inches or more in their longest dimension and the greatest thicknesses of such units do not vary more than 5/16 inch.

§ 52.2486 Definitions of defects and degrees of freedom from defects.

(a) *Small pieces.* "Small pieces" in the style of slices (or rings) means units that are less than 1 inch in their longest dimension.

(b) *Loose core or major portion thereof.* "Loose core or major portion thereof" means any part of an apple core that approximates one-half or more of the apparent original core including the seed cells and carpel tissue, with or without seeds. The seeds attached to such loose core or major portion thereof are not scorable as "seeds" within this section.

(c) *Seeds.* "Seeds" means any loose seeds or seeds attached to carpel tissue that are not considered a "loose core or major portion thereof."

(d) *Carpel tissue.* "Carpel tissue" means any hard tissue surrounding the seed cells that is not a part of a "loose core or major portion thereof."

(e) *Damaged.* (1) "Damaged by peel" means any unit possessing peel exceeding in the aggregate an area of a circle ¼ inch in diameter, regardless of the color of the peel.

(2) "Damaged by bruises or other discoloration, bitter pit or other corky tissue, and water core" means any unit of which the appearance or eating quality is materially affected by such defects. Slight, very light brown bruises are not regarded as "damage."

(3) "Damaged by other means" means units damaged by other defects not specifically mentioned, which materially affect the appearance or eating quality of the unit but does not include any filthy, decomposed, or deleterious substance.

(4) "Damaged by calyxes and stems" means that the appearance or eating quality of the unit is materially affected by such defects.

(f) *Practically free from defects.* "Practically free from defects" means that defects or defective units within the following limits may be present:

(1) No loose cores or major portions thereof;

(2) In the style of slices (or rings), not more than 5 percent, by weight, of the dried apples may be small pieces: *Provided,* That the appearance of the product is not materially affected by the presence of small pieces;

(3) Not more than 4 seeds for each 16 ounces of dried apples;

(4) Not more than 3 square inches of carpel tissue in the aggregate for each 16 ounces of dried apples; and

(5) Not more than 10 percent, by weight, of all the units may be damaged by peel, bruises or other discoloration, bitter pit or other corky tissue, water core, other means, calyxes, and stems: *Provided,* That not more than 1 percent, by weight, of all the units may be damaged by calyxes and stems.

(g) *Reasonably free from defects.* "Reasonably free from defects" means that defects or defective units within the following limits may be present:

(1) No loose cores or major portions thereof;

(2) In the style of slices (or rings), not more than 7 percent, by weight, of the dried apples may be small pieces: *Provided,* That the appearance of the product is not materially affected by the presence of small pieces;

(3) Not more than 6 seeds for each 16 ounces of dried apples;

(4) Not more than 6 square inches of carpel tissue in the aggregate for each 16 ounces of dried apples; and

(5) Not more than 15 percent, by weight of all the units may be damaged by peel, bruises or other discoloration, bitter pit or other corky tissue, water core, other means, calyxes, and stems: *Provided,* That not more than 2 percent, by weight, of all the units may be damaged by calyxes and stems.

(h) *Fairly free from defects.* "Fairly free from defects" means that defects or defective units within the following limits may be present:

(1) Not more than 1 loose core or major portion thereof for each 48 ounces of dried apples;

(2) In the style of slices (or rings), not more than 10 percent, by weight, of the dried apples may be small pieces: *Provided,* That the appearance of the product is not seriously affected by the presence of small pieces;

(3) Not more than 10 seeds for each 16 ounces of dried apples;

(4) Not more than 9 square inches of carpel tissue in the aggregate for each 16 ounces of dried apples; and

(5) Not more than 20 percent, by weight, of all the units may be damaged by peel, bruises or other discoloration, bitter pit or other corky tissue, water core, other means, calyxes, and stems: *Provided,* That not more than 3 percent, by weight, of all the units may be damaged by calyxes and stems.

§ 52.2487 Definitions of texture.

(a) *Good texture.* "Good texture" means that the units are generally pliable and there may be present a few hard and dry units.

(b) *Reasonably good texture.* "Reasonably good texture" means that the units may vary in pliability but are reasonably free from hard and dry units.

(c) *Fairly good texture.* "Fairly good texture" means that the texture may vary in degrees of pliability including hard and dry units.

§ 52.2488 Definition of flavor and odor

(a) *Normal flavor and odor.* "Normal flavor and odor" means a clean, typical dried apple flavor free from any objectionable flavor or objectionable odor of any kind. A flavor and odor from proper treatment by sulfur is not considered objectionable.

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.2489 Moisture.

"Moisture" means the percentage, by weight, of the dried apples that is moisture, when determined by the Dried Fruit Moisture Tester Method or in accordance with methods that give equivalent results.

WORK SHEET

§ 52.2490 Work sheet for dried apples.

Size and kind of container ....
Container mark or identification ....
Label or brand ....
Net weight ....
Style ....
Moisture content ....
Varietal characteristics: ( ) Similar; ( ) Dissimilar ....
Flavor and odor: ( ) Normal; ( ) Other ....
Color: ( ) Good; ( ) Reasonably good; ( ) Fairly good ....

Uniformity of size	Grade A	Grade B	Grade C
Pie pieces:			
Approximate thickness	1/16 to 1/4 inch	1/16 to 1/4 inch	1/16 to 5/16 inch
Length, 1 inch or more (minimum)	85 percent	60 percent	40 percent
Pass through 5/16 inch square (maximum).	2 percent	6 percent	10 percent
Slices (or rings):			
Approximate thickness (maximum)	1/4 inch	1/4 inch	5/16 inch
Whole and practically whole rings (minimum).	75 percent	60 percent	40 percent
Length, 1 1/4 inches, or more (minimum).	75 percent	60 percent	40 percent
Wedges:			
Variation in thickness (maximum)	1/4 inch	1/4 inch	5/16 inch
Length, 1 1/4 inches, or more (minimum).	90 percent	75 percent	50 percent
DEFECTS			
Slices (or rings): Small pieces (maximum)	5 percent	7 percent	10 percent
All styles:			
Seeds (maximum)	4 per 16 ounces	6 per 16 ounces	10 per 16 ounces
Carpel tissue (maximum per 16 ounces).	3 square inches	6 square inches	9 square inches
Loose cores (maximum)	None	None	10 per 48 ounces
Damaged, total (maximum)	10 percent	15 percent	2 percent
Includes calyxes and stems	1 percent	2 percent	3 percent

Texture: ( ) Good; ( ) Reasonably good; ( ) Fairly good

Grade

(All percentages are "by weight" of dried apples)

Subpart—United States Standards for Grades of Frozen Peas and Carrots

SOURCE: 20 FR 1010, Feb. 17, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, KINDS, TYPES, STYLES, PROPORTIONS OF INGREDIENTS, AND GRADES

§ 52.2501 Product description.

Frozen peas and carrots is the product prepared from the fresh, clean, sound, immature seed of the common garden pea (Pisum sativum) and the fresh, clean, sound roots of the carrot plant (Daucus carota sativa). The peas are prepared by shelling, washing, sorting, and blanching. The carrots are prepared by washing, sorting, trimming, peeling, cutting into approximate cubes, and blanching. The prepared ingredients are properly drained and mixed; are frozen in accordance with good commercial practice; and are maintained at temperatures necessary for the preservation of the product.

§ 52.2502 Kinds, types, styles, and proportions of vegetables.

(a) The kinds, types, styles, and proportions of the vegetables are as follows:

(1) *Peas.* Not less than 50 percent, by weight, of Early type or Sweet type peas.

(2) *Carrots.* Not less than 25 percent, by weight, of diced style carrots, predominantly 1/4 inch to 3/8 inch cubes.

(b) Compliance with the requirement for proportions of ingredients will be determined by averaging the total weight of each ingredient in all containers in the sample: *Provided,* That any deviation from the requirement for proportions of ingredients in any one sample does not exceed that expected under good commercial practice.

(c) The percentage, by weight, of the carrot ingredient consisting of units markedly smaller than one-half the volume of, or markedly larger than the predominating size of the dice is determined by separating all such units from the carrot ingredient composited from all of the containers in the sample, weighing the units, and dividing the aggregate weight of all such units by the aggregate weight of the carrot ingredient as determined in paragraph (b) of this section.

§ 52.2503 Grades of frozen peas and carrots.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen peas and carrots in which each vegetable possesses similar varietal characteristics; in which the vegetables possess a good color, are practically free from defects, possess a good character, possess a good flavor, and score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen peas and carrots in which each vegetable possesses similar varietal characteristics; in which the vegetables possess a reasonably good color, are reasonably free from defects, possess a reasonably good character, possess a good flavor, and score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen peas and carrots in which each vegetable possesses similar varietal characteristics; in which the vegetables possess a fairly good color, are fairly free from defects, possess a fairly good character, possess a fairly good flavor, and score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen peas and carrots that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FACTORS OF QUALITY

§ 52.2504 Ascertaining the grade.

(a) The grade of frozen peas and carrots is ascertained by considering the factors of quality which are not scored and those which are scored, as follows:

(1) *Factors which are not scored.* (i) Varietal characteristics.

(ii) Flavor.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Defects	20
Character	40
Total score	100

(b) The scores for the factors of color and defects are determined immediately after thawing so that the product may be handled as individual units. The evaluation of the factors of flavor and character is made immediately after thawing and after cooking the product.

(c) "Good flavor" means that the product and each of the vegetables has a good, characteristic, normal flavor and odor, free from objectionable flavors and objectionable odors of any kind.

(d) "Fairly good flavor" means that the product after cooking may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.2505 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "18 to 20 points" means 18, 19, or 20 points.)

§ 52.2506 Color.

(a) *General.* The factor of color refers to the overall appearance of the product and to the color and brightness of the vegetables individually.

(b) (*A*) *classification.* Frozen peas and carrots which possess a good color may be given a score of 36 to 40 points. "Good color" means that the product possesses a color that is bright and typical of young and tender peas and tender diced carrots and that the appearance of the product is not more than slightly affected by variations in the color of the carrots and of the peas.

(c) (*B*) *classification.* If the frozen peas and carrots possess a reasonably good color, a score of 32 to 35 points may be given. Frozen peas and carrots that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the product possesses a color that is reasonably bright and typical of reasonably young and reasonably tender peas and tender diced carrots, and that the appearance of the product is not materially affected by variations in the color of the carrots and of the peas.

(d) (*C*) *classification.* If the frozen peas and carrots possess a fairly good color, a score of 28 to 31 points may be given. Frozen peas and carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the product possesses a color that is typical of fairly young and fairly tender peas and reasonably tender diced carrots, may be dull but not off color, and the color of each ingredient may be variable but not to the extent that the appearance of the product is seriously affected.

(e) (*SStd.*) *classification.* If the frozen peas and carrots fail to meet the requirements of paragraph (d) of this section, a score of 0 to 27 points may be given and the product shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.2507 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous material, damaged units, seriously damaged units, and any other defects which detract from the appearance or edibility of the product.

(1) "Harmless extraneous material" means vegetable material common to the pea or carrot plant, such as leaves, stems, or pods, and predominantly spherical or cylindrical harmless material from other plants, such as thistle buds, nightshade berries, or seeds, which are succulent and similar in color to frozen peas.

(2) "Damaged unit" means any pea or carrot dice that is affected by discoloration or other blemish to the extent that the appearance or edibility of the unit is materially affected and has the following specific meanings with respect to each vegetable:

(i) *Peas.* Any spotted or off-colored pea (such as brown, gray, cream, or yellow-white).

(ii) *Carrots.* Any unit possessing an unpeeled area greater than the area of a circle ⅛ inch in diameter; and any unit blemished by internal or external discoloration, by sunburn or green color, or by other means.

(3) "Seriously damaged unit" means a pea or carrot dice that is damaged to the extent that the appearance and edibility of the unit is seriously affected and includes units with very dark spots or discolored units and other similar injury regardless of the area affected.

(4) "Other defects" means any defects not specially mentioned that affect the appearance or edibility of the product and include but are not limited to the following:

(i) *Peas.* Mashed peas, broken peas, loose cotyledons, loose skins, and any portions thereof.

(ii) *Carrots.* Crushed, broken, cracked or irregularly shaped units; units with excessively frayed edges and surfaces; and units markedly smaller than one-half the volume of, or markedly larger than, the predominating size of the dice.

(b) (*A*) *classification.* Frozen peas and carrots that are practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means compliance with the following requirements:

(1) Not more than one piece or pieces of extraneous pea or carrot material having an aggregate area of 3/16 square inch, or one spherical or cylindrical piece of other harmless extraneous vegetable material, for each 40 ounces of the product.

(2) Not more than 10 damaged and seriously damaged units for each 10 ounces of the product of which not more than 2 units are seriously damaged: *Provided,* That damaged and seriously damaged units, either singly or in combination, no more than slightly affect the appearance or eating quality of the product.

(3) Not more than 12 percent, by weight, of the carrot ingredient consists of units markedly smaller than one-half the volume of, or markedly larger than, the predominating size of the dice: *Provided*, That not more than twice this allowance or 24 percent, by weight, of such units may be present in any single sample.

(4) Other defects, individually or collectively, do not more than slightly affect the appearance of the product.

(c) (*B*) *classification.* If the frozen peas and carrots are reasonably free from defects a score of 16 or 17 points may be given. Frozen peas and carrots that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means compliance with the following requirements:

(1) Not more than one piece or pieces of extraneous pea or carrot material having an aggregate area of ⅜ square inch, or two spherical or cylindrical pieces of other harmless vegetable material for each 40 ounces of the product.

(2) Not more than 14 damaged and seriously damaged units for each 10 ounces of the product of which not more than 3 units are seriously damaged: *Provided*, That damaged and seriously damaged units, either singly or in combination, do not materially affect the appearance or edibility of the product.

(3) Not more than 17 percent, by weight, of the carrot ingredient consists of units markedly smaller than one-half the volume of, or markedly larger than, the predominating size of the dice: *Provided*, That not more than twice this allowance or 34 percent, by weight, of such units may be present in any single sample.

(4) Other defects, individually or collectively, do not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* If the frozen peas and carrots are fairly free from defects a score of 14 or 15 points may be given. Frozen peas and carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means compliance with the following requirements:

(1) Not more than one piece or pieces of extraneous pea or carrot material having an aggregate area of ¾ square inch, or three spherical or cylindrical pieces of other harmless vegetable material for each 40 ounces of the product.

(2) Not more than 17 damaged and seriously damaged units for each 10 ounces of the product of which not more than 5 units are seriously damaged: *Provided*, That the damaged and seriously damaged units, either singly or in combination, do not seriously affect the appearance or eating quality of the product.

(3) Not more than 25 percent, by weight, of the carrot ingredient consists of units markedly smaller than one-half the volume of, or markedly larger than, the predominating size of the dice: *Provided*, That not more than twice this allowance or 50 percent, by weight, of such units may be present in any single sample.

(4) Other defects, individually or collectively, do not seriously affect the appearance of the product.

(e) (*SStd.*) *classification.* Frozen peas and carrots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.2508 Character.

(a) *General.* The factor of character refers to the tenderness and maturity of the peas; and the tenderness and degree of freedom from stringy or coarse fibers in the carrots; and to the tenderness of the combined vegetables after cooking.

(b) *Meaning of terms.* Unless indicated otherwise the meaning of the terms pertaining to the tenderness and maturity of each vegetable prior to cooking are the same as those in the applicable United States standards for grades of the respective frozen product.

(c) (*A*) *classification.* Frozen peas and carrots which possess a good character may be given a score of 36 to 40 points. "Good character" means that the combined vegetables after cooking are tender and that each vegetable prior to cooking meets the following requirements:

(1) *Peas.* The peas are reasonably tender and are the equivalent of frozen peas that would score not less than 34 points for the factor of "tenderness and maturity" as outlined in the "United States Standards for Grades of Frozen Peas."

(2) *Carrots.* The carrots are tender, not fibrous, and possess a practically uniform texture.

(d) (*B*) *classification.* If the frozen peas and carrots possess a reasonably good character a score of 32 to 35 points may be given. Frozen peas and carrots that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the combined vegetables after cooking are reasonably tender and that each vegetable prior to cooking meets the following requirements:

(1) *Peas.* The peas are reasonably tender and are the equivalent of frozen peas that would score not less than 32 points for the factor of "tenderness and maturity" as outlined in the "United States Standards for Grades of Frozen Peas."

(2) *Carrots.* The carrots are tender, not fibrous, and possess a practically uniform texture.

(e) (*C*) *classification.* If the frozen peas and carrots possess a fairly good character a score of 28 to 31 points may be given. Frozen peas and carrots that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the combined vegetables after cooking are fairly tender and that each vegetable prior to cooking meets the following requirements:

(1) *Peas.* The peas are at least fairly tender.

(2) *Carrots.* The carrots are at least reasonably tender, may be variable in texture but are not tough or hard, and there may be present a few units which possess a coarse fibrous texture.

(f) (*SStd.*) *classification.* Frozen peas and carrots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2509 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2510 Score sheet for frozen peas and carrots.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....

Kinds of ingredients	Aggregate weight each ingredient (ounces)	Proportion of ingredients (percent)
Peas: ( ) sweet; ( ) early		
Carrots: diced (approx. "—" cubes)		
Grand total weight		100

Factors		Score points	
Color	40	(A)	36-40
		(B)	[1] 32-35
		(C)	[1] 28-31
		(SStd.)	[1] 0-27
Defect	20	(A)	18-20
		(B)	[1] 16-17
		(C)	[1] 14-15
		(SStd.)	[1] 0-13
Character	40	(A)	36-40
		(B)	[1] 32-35
		(C)	[1] 28-31

(SStd.)	[1] 0-27
Total score	
Grade	

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Concentrate for Limeade[1]

SOURCE: 20 FR 2748, Apr. 26, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.2521 Product description.

Frozen concentrate for limeade is the product prepared from lime juice and one or more nutritive sweetening ingredients to which may be added oil derived from limes for added flavor, and may or not contain water in sufficient quantitites to standardize the product. The lime juice is produced from fresh, sound, mature, and thoroughly cleansed fruit of one or more of the varieties of the species citrus aurantifolia. Such juice may be fresh or frozen or may be fresh juice concentrated or frozen concentrated. The concentrate for limeade is processed in accordance with good commercial practice and is frozen and maintained at temperatures sufficient for the preservation of the product. If properly labeled any artificial color permissible under the provisions of the Federal Food, Drug and Cosmetic Act may be added.

[21 FR 7513, Oct. 2, 1956. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2522 Grades of frozen concentrate for limeade.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen concentrate for limeade which mixes readily into a limeade that possesses an amount of pulp and cloud, so as to substantially reflect the appearance of limeade prepared from freshly expressed lime juice; that possesses a good color; that is practically free from defects; that possesses a good flavor; and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen concentrate for limeade which mixes readily into a limeade that possesses at least a slight, but not an excessive, amount of pulp and cloud so as to reasonably reflect the appearance of limeade prepared from freshly expressed lime juice; that possesses a reasonably good color; that is reasonably free from defects; that possesses a reasonably good flavor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen concentrate for limeade that fails to meet the requirements of "U.S. Grade B" or "U.S. Choice."

FILL OF CONTAINER

§ 52.2523 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full as practicable with frozen concentrate for limeade.

FACTORS OF QUALITY

§ 52.2524 Ascertaining the grade.

(a) *General.* The grade of frozen concentrate for limeade is ascertained by considering the factors of quality which are not scored and those which are scored as follows:

(1) *Factors which are not scored* (i) Ease of mixing into limeade.

(ii) Amount of pulp and cloud.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

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[1] The product covered by these standards is essentially lime juice sweetened for limeade but is marketed under the name "Frozen Concentrate for Limeade."

Factors	Points
Color	20
Defects	20
Flavor	60
Total score	100

(b) *Determination of scores.* The scores for the factors of color, defects, and flavor are determined immediately after the product has been prepared as limeade by thoroughly mixing the frozen concentrate for limeade with a specific volume of water as directed by the manufacturer.

§ 52.2525 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, or 20 points.)

§ 52.2526 Color.

(a) (*A*) *classification.* Frozen concentrate for limeaid which, when prepared as limeade, possesses a good color may be given a score of 17 to 20 points. "Good color" means a good bright characteristic color that reflects the appearance of limeade prepared from freshly expressed lime juice; or, if artificially colored, possesses a bright attractive light green color typical of artificially colored limeade.

(b) (*B*) *classification.* If the frozen concentrate for limeade, when prepared as limeade, possesses a reasonably good color a score of 14 to 16 points may be given. Frozen concentrate for limeade that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice," regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means a characteristic color that reflects to a reasonable extent the color of limeade prepared from freshly expressed lime juice and is not dark or otherwise discolored for any reason; or, if artificially colored, possesses a reasonably bright color typical of artificially colored limeade.

(c) (*SStd.*) *classification.* If the limeade fails to meet the requirements of paragraph (b) of this section, a score of 0 to 13 points may be given. Frozen concentrate for limeade that falls into this classification shall not be graded above "Substandard" regardless of the total score for the product (this is a limiting rule).

[21 FR 7513, Oct. 2, 1956. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2527 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from seeds or portions of seeds, from harmless extraneous material, from objectionable material and from other defects not specifically mentioned that affect the appearance or drinking quality of the product.

(1) "Harmless extraneous material" includes, but is not limited to, particles of seeds, rag, peel and pulp that will pass through round perforations not exceeding ⅛ inch in diameter.

(2) "Seeds or portions of seeds" means (i) any intact seed or (ii) any portion of a seed that will not pass through a round performation ⅛ inch in diameter.

(b) (*A*) *classification.* Frozen concentrate for limeade which, when prepared as limeade, is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that there may be present not more than an average of one seed or portion of seed for each quart of prepared limeade; and that the appearance and drinking quality of the limeade is not materially affected by the presence of seeds, portions of seeds, objectionable material, harmless extraneous material, any other defects not specifically mentioned, or any combination thereof.

(c) (*B*) *classification.* If the limeade is reasonably free from defects a score of 14 to 16 points may be given. Frozen concentrate for limeade that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice" regardless of the total score for the product (this is a limiting rule) "Reasonably free from defects" means that there may be present not more than an average of two seeds or portions of seeds for each quart of limeade; and that the appearance and drinking quality of the limeade is not seriously affected by the presence of seeds, portions of seeds, objectionable material, harmless extraneous material, any other defects not specifically mentioned, or any combination thereof.

(d) (*SStd.*) *classification.* If the limeade fails to meet the requirements of paragraph (c) of this section a score of 0 to 13 points may be given. Frozen concentrate for limeade that falls into this classification shall not be graded above "Substandard" regardless of the total score for the product (this is a limiting rule).

§ 52.2528 Flavor.

(a) (*A*) *classification.* Frozen concentrate for limeade which, when prepared as limeade, possesses a good flavor may be given a score of 51 to 60 points. "Good flavor" means a fine, distinct, and substantially typical flavor of limeade prepared from freshly expressed lime juice and which flavor is free from terpenic, oxidized, rancid, or other off flavors. To score in this classification, the limeade shall test not less than 10.5 degrees Brix; shall contain not less than 0.7 gram of acid per 100 ml. of the limeade; may not contain more than 0.025 ml. or less than 0.008 ml. of recoverable oil per 100 ml. of the limeade; and the Brix-acid ratio shall not exceed 18:1.

(b) (*B*) *classification.* If the prepared limeade possesses a reasonably good flavor a score of 42 to 50 points may be given. Frozen concentrate for limeade that falls into this classification shall not be graded above "U.S. Grade B" or "U.S. Choice" regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor" means a fairly typical flavor of limeade prepared from freshly expressed lime juice and which flavor is practically free from terpenic, oxidized, rancid, or other off flavors and is free from abnormal flavors of any kind. To score in this classification the limeade shall test not less than 10.5 degrees Brix; shall contain not less than 0.7 gram of acid per 100 ml. of the limeade; may not contain more than 0.035 ml. or less than 0.008 ml. of recoverable oil per 100 ml. of the limeade; and the Brix-acid ratio shall not exceed 18:1.

(c) (*SStd.*) *classification.* If the prepared limeade fails to meet the requirements of paragraph (b) of this section a score of 0 to 41 points may be given. Frozen concentrate for limeade that falls into this classification shall not be graded above "Substandard" regardless of the total score for the product (this is a limiting rule).

[20 FR 2748, Apr. 26, 1955, as amended at 33 FR 11885, Aug. 1968. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.2529 Definition of terms.

(a) "Brix" means the degree Brix of the limeade when tested with a Brix hydrometer calibrated at 20 degrees C. (68 degrees F.) If used in testing limeade at a temperature other than 20 degrees C. (68 degrees F.) the applicable temperature correction shall be made to the reading of the scale as prescribed in "Official Methods of Analysis of the Association of Official Agricultural Chemists." The degrees Brix of limeade may be determined by any other method which gives equivalent results.

(b) "Acid" means the grams of acid (calculated as anhydrous citric acid) per 100 ml. of the prepared limeade determined by titration with standard sodium hydroxide solution using phenolphthalein as an indicator.

(c) "Brix-acid ratio" means the ratio between the degrees "Brix" as determined in this section and the acid in grams per 100 ml. of limeade.

(d) "Dilution factor" is the value obtained by dividing a volume of limeade by the volume of concentrate for limeade used in its preparation when such limeade is prepared in accordance with the manufacturer's directions.

§ 52.2530 Explanation of analyses.

Recoverable oil is determined by the following method:

METHOD

(1) *Reagents.*

Standard bromide-bromate solution—prepared and standardized to 0.099N in accordance with Chapter 42. Standard Solutions in the current edition of the AOAC.[1] For use add 1 volume of standard solution to 3 volumes of water to make 0.0247N solution. 1 ml of 0.0247N solution supplies bromine to react with 0.00085g., or 0.0010 ml., of *d*-limonene. The solutions are stable for 6 months.

2-Propanol—Reagent grade ACS (American Chemical Society).

Subpart—United States Standards for Grades of Canned Asparagus

SOURCE: 38 FR 13336, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, GRADES, AND TYPES

§ 52.2541 Identity.

"Canned asparagus" means the canned product prepared from clean, sound, succulent shoots of the asparagus plant prepared and processed in accordance with good commercial practice as such product is defined in the standard of identity for canned asparagus (21 CFR 155.200) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.2542 Styles.

(a) "Spears" (stalks), which may be peeled or unpeeled, is the style of canned asparagus that consists of the head and adjoining portion of the shoot that is 3¾ inches or more in length.

(b) "Tips" is the style of canned asparagus that consists of the head and adjoining portion of the shoot that is less than 3¾ inches but not less than 2¾ inches in length.

(c) "Points" is the style of canned asparagus that consists of the head and adjoining portion of the shoot that is less than 2¾ inches in length.

(d) "Cut spears" (cut stalks) is the style of canned asparagus that consists of shoots cut transversely into pieces. The recommended minimum percent, by count, of heads in cut spears is given in table I of this section.

TABLE I—RECOMMENDED MINIMUM PERCENT, BY COUNT, OF HEADS IN CUT SPEARS

Length of units	Percent, by count, of heads
1¼ inches or less	15
Over 1¼ inches	20

(e) "Bottom cuts" or "cuts—tips removed" is the style of canned asparagus that consists of portions of shoots with heads removed that are cut transversely into pieces.

(f) "Mixed" is the style of canned asparagus consisting of two or more of the foregoing styles.

§ 52.2543 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned asparagus that possesses a good flavor; that possesses a clear liquor; that possesses a good color; that is practically free from defects; that possesses a good character; and that for those factors which are scored in accordance with the scoring system outlined in this section the total score is not less than 85 points: *Provided,* That the canned asparagus may possess a fairly clear liquor and a fairly good color if the total score is no less than 85 points.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned asparagus that possesses a fairly good flavor; that possesses a fairly clear liquor; that possesses a fairly good color; that is fairly free from defects; that possesses a fairly good character; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this section.

(c) "Substandard" is the quality of canned asparagus that fails to meet the requirements of U.S. Grade C or U.S. Standard.

§ 52.2544 Types.

The type of canned asparagus is not incorporated in the grades of the processed product, since the type of canned asparagus is not a factor of quality for the purpose of these grades. The type of asparagus may be designated in accordance with the following requirements:

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[1] "AOAC" refers to the Official Methods of Analysis published by the Association of Official Analytical (formerly Agricultural) Chemists. Copies may be obtained from this Association at Box 540, Benjamin Franklin Station, Washington, D.C. 20044.

(a) "Green" (all green) consists of units of canned asparagus which are typical green, light green, or yellowish green in color.

(b) "Green tipped" consists of canned asparagus spears, tips, and points, of which one-half or more of the unit measured from the tip end is green, light green, or yellowish green in color.

(c) "Green tipped and white" consists of (1) spears, tips, and points of canned asparagus which are typical white or yellowish white in color, and may have green, light green, or yellowish green heads, and the green color may extend to not more than one-half of the length of the stalk measured from the tip end; and (2) green tipped and white spears, tips, and points, when cut into units, may consist of a mixture of typical white, yellowish white, green, light green, or yellowish green units.

(d) "White" consists of units of canned asparagus which are typical white or yellowish white in color.

FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.2545 Recommended fill of container.

The recommended fill of container for canned asparagus is not incorporated in the grades of the processed product, since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned asparagus be filled as full as practicable with asparagus without impairment of quality.

§ 52.2546 Recommended minimum drained weights.

(a) *General.* The minimum drained weight recommendations in table II are not incorporated in the grades of the processed product, since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining drained weights.* The drained weight of canned asparagus is determined by emptying the contents of the container upon a U.S. Standard No. 8 sieve of proper diameter, inclining the sieve to facilitate drainage, and allow to drain for 2 minutes. The drained weight is the weight of the sieve and the asparagus less the weight of the dry sieve. A sieve 8 in. in diameter is used for the No. 2½ can (401 × 411) and smaller sizes, and a sieve 12 in. in diameter is used for containers larger than the No. 2½ size can.

(c) *Definitions of symbols.* (1) X_d—the average drained weight of all the sample units in the sample.

(2) LL—lower limit for drained weights of individual sample units.

(d) *Compliance with recommended minimum drained weights.* A lot of canned asparagus is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights of all the sample units in the sample meets the recommended minimum average drained weight (designated as X_d in table II); and

(2) The number of sample units which fail to meet the recommended drained weight lower limit for individuals (designated as LL in table II) does not exceed the applicable acceptance number specified in table III.

TABLE II—RECOMMENDED MINIMUM DRAINED WEIGHT FOR CANNED ASPARAGUS

Container designation (metal, unless otherwise stated)	Container dimensions (inches; or water capacity in ounces avoirdupois as applicable)		Small, medium, or large sizes; and blends of these sizes				Extra large, colossal, giant sizes; or blends including these sizes				Cuts spears, bottom cuts-tips removed			
	Diameter	Height	Green tipped and white; white (ounces)		Green and green tipped (ounces)		Green tipped and white; white (ounces)		Green and green tipped (ounces)		Green tipped and white (ounces)		Green (ounces)	
			LL	X_d	LL	X_d	LL	X_d	LL	X_d	LL	X_d	LL	X_d
8 oz glass	8.5 oz avdp		4.8	5.1	4.6	4.9	4.8	5.1	4.6	4.9	4.7	5.0	4.4	4.7
8Z short	2 11/16	3	4.4	4.7	4.2	4.5	4.4	4.7	4.2	4.5	4.2	4.5	4.1	4.3
8Z tall	2 11/16	3 4/16	4.9	5.2	4.7	5.0	4.9	5.2	4.7	5.0	4.7	5.0	4.5	4.8
No. 1 picnic	2 11/16	4	6.6	7.0	5.8	6.2	6.1	6.5	5.6	6.0	6.2	6.5	5.7	6.0
12Z	2 11/16	4 9/16	7.6	8.0	7.1	7.5	7.3	7.7	6.8	7.2	7.3	7.7	6.8	7.2
13½Z glass	14.0 oz avdp		8.6	9.1	7.8	8.3	8.1	8.6	7.5	8.0				
No. 300	3	4 7/16	9.0	9.5	8.2	8.7	8.5	9.0	7.9	8.4	8.6	9.0	8.2	8.6
300 × 409	3	4 9/16	9.2	9.7	8.5	9.0	8.7	9.2	8.1	8.6	8.8	9.2	8.4	8.8
No. 1 tall	3 1/16	4 11/16	9.9	10.5	8.8	9.4	9.3	9.9	8.5	9.1	9.1	9.6	8.6	9.1
No. 303 glass	17.7 oz avdp		10.3	10.9	9.1	9.7	9.7	10.3	8.8	9.4	9.4	9.9	8.9	9.4
No. 303	3 3/16	4 6/16	10.1	10.7	8.9	9.5	9.5	10.1	8.6	9.2	9.2	9.7	8.7	9.2
No. 303 cylinder	3	5 9/16			10.3	11.0			9.8	10.5				
No. 2	3 7/16	4 9/16	12.3	13.0	11.1	11.8	11.6	12.3	10.6	11.3	12.1	12.7	11.1	11.7
No. 2½ glass	29.5 oz avdp		17.7	18.7	16.0	17.0	16.7	17.7	15.5	16.5	17.6	18.3	16.0	16.7
No. 2½	4 1/16	4 11/16	18.0	19.0	16.2	17.2	17.0	18.0	15.7	16.7	17.8	18.5	16.2	16.9
No. 5 squat	6 3/16	4 6/16	41.5	43.0	37.5	39.0	39.5	41.0	36.5	38.0	41.0	42.0	37.0	38.0
No. 10	6 3/16	7									63.1	64.5	58.8	60.2

TABLE III—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29	38	48	60	72
Acceptance No	0	1	2	3	4	5	6	7	8

§ 52.2547 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations specified in tables IV, V, VI, VII, VIII, and IX are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weights.* Fill weight is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the minimum lot average fill weight.

LWL_x means the lower warning limit for subgroup averages.

LRL_x means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the reject limit for individual fill weight measurements.

R' means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the Sampling Allowance Chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE IV—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal, unless otherwise designated)	Green and green tipped—spears, tips, or points (small, medium, large, or blends of these sizes)							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8 oz glass	5.0	4.7	4.6	4.4	4.1	0.70	1.50	E
8Z short	4.6	4.3	4.2	4.0	3.7	0.70	1.50	E
8Z tall	5.1	4.8	4.7	4.5	4.2	0.70	1.50	E
No. 1 picnic	6.3	6.0	5.8	5.6	5.2	0.80	1.70	F
12Z	7.6	7.2	7.0	6.8	6.4	0.90	2.0	G
13½Z glass	8.4	8.0	7.8	7.5	7.0	1.10	2.20	H
No. 300	8.8	8.4	8.2	7.9	7.4	1.10	2.20	H
300 x 409	9.1	8.7	8.5	8.2	7.7	1.10	2.20	H
No. 1 tall	9.6	9.1	8.9	8.6	8.1	1.20	2.50	I
No. 303 glass	9.9	9.4	9.2	8.9	8.4	1.20	2.50	I
No. 303	9.7	9.2	9.0	8.7	8.2	1.20	2.50	I
No. 300 cylinder	11.2	10.6	10.3	9.9	9.2	1.50	3.20	L
No. 2	12.0	11.4	11.1	10.7	10.0	1.50	3.20	L
No. 2½ glass	17.4	16.5	16.1	15.5	14.5	2.20	4.70	R
No. 2½	17.6	16.7	16.3	15.7	14.7	2.20	4.70	R
No. 5 squat	41.0	39.7	39.1	38.2	36.8	3.30	6.90	W

TABLE V—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal, unless otherwise designated)	Green and green tipped—spears, tips, or points (extra large, colossal giant, or blends including these sizes)							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8 oz glass	5.0	4.7	4.6	4.4	4.1	0.70	1.50	E
8Z short	4.6	4.3	4.2	4.0	3.7	0.70	1.50	E
8Z tall	5.1	4.8	4.7	4.5	4.2	0.70	1.50	E
No. 1 picnic	6.1	5.8	5.6	5.4	5.0	0.80	1.70	F
12Z	7.3	6.9	6.7	6.5	6.1	0.90	2.0	G
13½Z glass	8.1	7.7	7.5	7.2	6.7	1.10	2.20	H
No. 300	8.6	8.2	8.0	7.7	7.2	1.10	2.20	H
300 x 409	8.8	8.4	8.2	7.9	7.4	1.10	2.20	H
No. 1 tall	9.3	8.8	8.6	8.3	7.8	1.20	2.50	I
No. 303 glass	9.2	8.7	8.5	8.2	7.7	1.20	2.50	I
No. 303	9.4	8.9	8.7	8.4	7.9	1.20	2.50	I
No. 300 cylinder	10.7	10.1	9.8	9.4	8.7	1.50	3.20	L
No. 2	11.6	11.0	10.7	10.3	9.6	1.50	3.20	L
No. 2½ glass	16.9	16.0	15.6	15.0	14.0	2.20	4.70	R
No. 2½	17.1	16.2	15.8	15.2	14.2	2.20	4.70	R
No. 5 squat	39.5	38.2	37.6	36.7	35.3	3.50	6.90	W

TABLE VI—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal, unless otherwise designated)	Green tipped and white; and white—spears, tips, or points (small, medium, large, or blends of these sizes)							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8 oz glass	5.2	4.9	4.8	4.6	4.3	.70	1.50	E
8Z short	4.8	4.5	4.4	4.2	3.9	.70	1.50	E
8Z tall	5.3	5.0	4.9	4.7	4.4	.70	1.50	E
No. 1 picnic	7.1	6.8	6.6	6.4	6.0	.80	1.70	F
12Z	7.9	7.5	7.3	7.1	6.7	.90	2.0	G
13½Z glass	9.2	8.8	8.6	8.3	7.8	1.10	2.20	H
No. 300	9.6	9.2	9.0	8.7	8.2	1.10	2.20	H
300 × 409	9.8	9.4	9.2	8.9	8.4	1.10	2.20	H
No. 1 tall	10.7	10.2	10.0	9.7	9.2	1.20	2.50	I
No. 303 glass	11.1	10.6	10.4	10.1	9.6	1.20	2.50	I
No. 303	10.9	10.4	10.2	9.9	9.4	1.20	2.50	I
No. 2	13.2	12.6	12.3	11.7	11.2	1.50	3.20	L
No. 2½ glass	19.0	18.1	17.7	17.1	16.1	2.20	4.70	R
No. 2½	19.3	18.4	18.0	17.4	16.4	2.20	4.70	R

TABLE VI—RECOMMENDED FILL WEIGHT VALUES—Continued

Container designation (metal, unless otherwise designated)	Green tipped and white; and white—spears, tips, or points (small, medium, large, or blends of these sizes)							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
No. 5 squat	44.5	43.2	42.6	41.7	40.3	3.30	6.90	W

TABLE VII—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal, unless otherwise designated)	Green tipped and white; and white—spears, tips, or points (extra large, colossal, giant, or blends of these sizes)							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8 oz glass	5.2	4.9	4.8	4.6	4.3	0.70	1.50	E
8Z short	4.8	4.5	4.4	4.2	3.9	0.70	1.50	E
8Z tall	5.3	5.0	4.9	4.7	4.4	0.70	1.50	E
No. 1 picnic	6.6	6.3	6.1	5.9	5.5	0.80	1.70	F
12Z	7.8	7.4	7.2	7.0	6.6	0.90	2.0	G
13½Z glass	8.7	8.3	8.1	7.8	7.3	1.10	2.20	H
No. 300	9.1	8.7	8.5	8.2	7.7	1.10	2.20	H
300 × 409	9.4	9.0	8.8	8.5	8.0	1.10	2.20	H
No. 1 tall	10.1	9.6	9.4	9.1	8.6	1.20	2.50	I
No. 303 glass	10.5	10.0	9.8	9.5	9.0	1.20	2.50	I
No. 303	10.3	9.8	9.6	9.3	8.8	1.20	2.50	I
No. 2	12.5	11.9	11.5	11.2	10.5	1.50	3.20	L
No. 2½ glass	18.0	17.1	16.7	16.1	15.1	2.20	4.70	R
No. 2½	18.3	17.4	17.0	16.4	15.4	2.20	4.70	R
No. 5 squat	42.5	41.2	40.6	39.7	38.3	3.30	6.90	W

TABLE VIII—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal, unless otherwise designated)	Green—cut spears; bottom cuts; or cuts-tips removed							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8 oz glass	4.9	4.6	4.5	4.3	4.0	0.70	1.50	E
8Z short	4.5	4.2	4.1	3.9	3.6	0.70	1.50	E
8Z tall	5.0	4.7	4.6	4.4	4.1	0.70	1.50	E
No. 1 picnic	6.3	6.0	5.9	5.7	5.4	0.70	1.50	E
12Z	7.5	7.2	7.0	6.8	6.4	0.80	1.70	F
No. 300	8.9	8.5	8.3	8.1	7.7	0.90	2.0	G
300 × 409	9.1	8.7	8.5	8.3	7.9	0.90	2.0	G
No. 1 tall	9.4	9.0	8.8	8.5	8.0	1.10	2.20	H
No. 303 glass	9.7	9.3	9.1	8.8	8.3	1.10	2.20	H
No. 303	9.5	9.1	8.9	8.6	8.1	1.10	2.20	H
No. 2	12.0	11.5	11.3	11.0	10.5	1.20	2.50	I
No. 2½ glass	17.3	16.7	16.4	16.0	15.4	1.40	3.0	K
No. 2½	17.5	17.0	16.7	16.3	15.7	1.40	3.0	K
No. 5 squat	41.0	40.2	39.8	39.2	38.3	2.10	4.40	Q
No. 10	65.5	64.3	63.7	62.9	61.6	3.0	6.40	V

TABLE IX—RECOMMENDED FILL WEIGHT VALUES

Container designation (metal, unless otherwise designated)	Green tipped and white—cut spears; bottom cuts; or cuts-tips removed							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8 oz glass	5.3	5.0	4.9	4.7	4.4	0.70	1.50	E
8Z short	4.8	4.5	4.4	4.2	3.9	0.70	1.50	E
8Z tall	5.4	5.1	5.0	4.8	4.5	0.70	1.50	E
No. 1 picnic	6.8	6.5	6.4	6.2	5.9	0.70	1.50	E

TABLE IX—RECOMMENDED FILL WEIGHT VALUES—Continued

Container designation (metal, unless otherwise designated)	Green tipped and white—cut spears; bottom cuts; or cuts-tips removed							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
12Z	8.0	7.7	7.5	7.3	6.9	0.80	1.70	F
No 300	9.4	9.0	8.8	8.6	8.2	0.90	2.0	G
300 × 409	9.6	9.2	9.0	8.8	8.4	0.90	2.0	G
No. 1 tall	9.9	9.5	9.3	9.0	8.5	1.10	2.20	H
No. 303 glass	10.2	....	9.6	9.3	8.8	1.10	2.20	H
No. 303	10.0	.6	9.4	9.1	8.6	1.10	2.20	H
No. 2	13.0	12.5	12.3	12.0	11.5	1.20	2.50	I
No. 2½ glass	18.8	18.3	18.0	17.6	17.0	1.40	3.0	K
No. 2½	19.0	18.5	18.2	17.8	17.2	1.40	3.0	K
No. 5 squat	44.5	43.7	43.3	42.7	41.8	2.10	4.40	O
No. 10	71.0	69.8	69.2	68.4	67.1	3.0	6.40	V

[38 FR 13336, May 21, 1973; 38 FR 15511, June 13, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SIZE (DIAMETER) OF SPEARS, TIPS, AND POINTS

§ 52.2548 Size (diameter) of spears, tips, and points.

The size (diameter) of asparagus spears, tips, and points in canned asparagus is determined by measuring the largest diameter across the base at right angles to the longitudinal axis of the unit. Units compressed in processing should be restored to their approximate original contour before sizing. Asparagus spears longer than 5 in are measured at a point 5 in from the top of the spear. Units 5 in in length and less are measured at the base or largest cut end of the unit.

§ 52.2549 Compliance with single size recommendations.

Canned asparagus spears, tips, and points will be considered as meeting a designated size when not more than 20 percent, by count, of all the units are of the next size smaller or the next size larger than the diameter range of the particular size designation.

TABLE X—SIZES (DIAMETER) OF ASPARAGUS SPEARS, TIPS, AND POINTS IN CANNED ASPARAGUS

Word designation	Diameter (16ths of inch)
Small	Approximately 6/16.
Medium	6/16 to 8/16.
Large	8/16 to 10/16.
Extra large or mammoth.	10/16 to 13/16.

TABLE X—SIZES (DIAMETER) OF ASPARAGUS SPEARS, TIPS, AND POINTS IN CANNED ASPARAGUS—Continued

Word designation	Diameter (16ths of inch)
Colossal	13/16 to 16/16.
Giant	16/16 and over.
Blend of sizes	A mixture of 2 or more of the foregoing sizes.

FACTORS OF QUALITY

§ 52.2550 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factor not rated by score points* (i) Flavor.

(2) *Factors rated by score points* (i) The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Liquor	10
Color	20
Defects	30
Character	40
Total score	100

(ii) "Good flavor" means that the product has a good, characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(iii) "Fairly good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.2551 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is rated by score points are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each such factor is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2552 Liquor.

(a) (*A*) *classification*. Canned asparagus that possesses a clear liquor may be given a score of 9 or 10 points. "Clear liquor" means that the liquor may possess a typical yellow or green color and is fairly free from suspended material and sediment.

(b) (*C*) *classification*. If the canned asparagus possesses a fairly clear liquor a score of 7 or 8 points may be given. "Fairly clear liquor" means that the liquor may be cloudy but not excessively cloudy or may possess an accumulation of sediment which may be slightly gray or slightly brown but is not seriously objectionable and is not off color.

(c) (*SStd*) *classification*. Canned asparagus that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2553 Color.

(a) *General*. The color of asparagus in canned asparagus is based on the type and style of asparagus and the characteristic and predominant color of the units.

(b) (*A*) *classification*. Canned asparagus that possesses a good color may be given a score of 17 to 20 points. "Good color" has the following meanings with respect to the following types and styles of canned asparagus:

(1) *Spears, tips, or points*—(i) *Green*. The units possess a good, characteristic, green, light green, or yellowish green color typical of well developed asparagus, and the bottom portion of not more than 10 percent, by count, of the units, or one unit, whichever is larger, may possess typical white or yellowish white color not to exceed one-eighth of the length of the unit.

(ii) *Green tipped*. The units possess a good, characteristic, green, light green, or yellowish green color with typical white or yellowish white color at the base ends, typical of well developed asparagus, and not more than 20 percent, by count, of the units may possess typical white or yellowish white color in excess of one-half of the length of the unit or may be all green.

(iii) *Green tipped and white*. The units possess a good, characteristic, white or yellowish white color, and may possess green, light green, or yellowish green heads and adjacent areas typical of well developed asparagus, and not more than 20 percent, by count, of the units may possess green, light green, or yellowish green heads and adjacent areas exceeding one-half of the length of the unit.

(iv) *White*. The units possess a good, characteristic, white, or yellowish white color typical of well developed asparagus, and not more than 10 percent, by count, of the units, or one unit, whichever is larger, may possess green, light green, or yellowish green heads and adjacent areas not to exceed one-half of the length of the unit.

(2) *Cut spears, bottom cuts or cuts—tips removed, and mixed*—(i) *Green*. The units possess a good, characteristic, green, light green, or yellowish green color typical of well developed asparagus, and not more than 10 percent, by count, of the units may be green and white or white: *Provided*, That not more than 2 percent, by count, of all the units may be white.

(ii) *Green tipped and white or white*. The units possess a good, characteristic color typical of well developed green tipped and white or white asparagus.

(c) (*C*) *classification*. If the canned asparagus possesses a fairly good color, a score of 14 to 16 points may be given. "Fairly good color" has the following meanings with respect to the following types and styles of canned asparagus:

(1) *Spears, tips, or points*—(i) *Green.* The units possess a fairly good, characteristic, green, light green, or yellowish green color typical of fairly well developed asparagus and the bottom portion of not more than 20 percent, by count, of the units may possess typical white or yellowish white color not to exceed one-fourth of the length of the unit.

(ii) *Green tipped.* The units possess a fairly good, characteristic, green, light green, or yellowish green color with typical white or yellowish white color at the base ends, typical of fairly well developed asparagus, and not more than 50 percent, by count, of the units may possess typical white or yellowish white color in excess of one-half of the lenth of the unit, or may be all green.

(iii) *Green tipped and white.* The units possess a fairly good characteristic, white or yellowish white color and may possess green, light green, or yellowish green heads and adjacent areas typical of fairly well developed asparagus, and not more than 50 percent, by count, of the units may possess green, light green, or yellowish green heads and adjacent areas in excess of one-half of the length of the unit.

(iv) *White.* The units possess a fairly good, characteristic, white or yellowish white color typical of fairly well developed white asparagus, and not more than 20 percent, by count, of the units may posses green, light green, or yellowish green heads and adjacent areas not to exceed one-half of the length of the unit.

(2) *Cut spears, bottom cuts or cuts—tips removed, and mixed*—(i) *Green.* The units possess a fairly good, characteristic, green, light green, or yellowish green color typical of fairly well developed asparagus and not more than 20 percent, by count, of the units may be green and white or white: *Provided,* That not more than 5 percent, by count, of all the units may be white.

(ii) *Green tipped and white or white.* The units possess a fairly good, characteristic color typical of fairly well developed green tipped and white or white asparagus.

(d) (*SStd*) *classification.* Canned asparagus that fails to meet the requirements of paragraph (c) of this section or is definitely off color may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2554 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from grit or silt, loose material, shattered heads, poorly cut unit, damaged units, and seriously damaged units.

(1) "Grit or silt" means sand or any other particle of earthy material.

(2) "Loose material" means shattered asparagus material and cut or broken pieces which are less than three-eights inch in length.

(3) "Shattered head" means any unit with the asparagus head broken or shattered to the extent that the appearance is seriously affected.

(4) "Misshapen" means any spear, tip, or point that is badly crooked, or any unit that is seriously affected in appearance by doubles or other malformations.

(5) "Poorly cut" means a unit that has a very ragged, stringy, or frayed edge or edges, or a unit that is partially cut, or is cut at an angle of less than approximately 45 degrees.

(6) "Damaged" means damaged by discoloration, mechanical injury, or damaged by other means to the extent that the appearance or edibility of the unit is materially affected.

(7) "Seriously damaged" means damaged to such an extent that the appearance or edibility of the unit is seriously affected.

(b) (*A*) *classification.* Canned asparagus that is practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means that no grit or silt may be present that affects the appearance or edibility of the product; that loose material may be present that does not materially affect the appearance of the product; and that with respect to the following styles of canned asparagus:

(1) *Spears, tips, and points.* There may be present with respect to green and green tipped types not more than 10 percent, and with respect to green tipped and white types not more than 15 percent, by count, of units with shattered heads, misshapen units and poorly cut units, and damaged and seriously damaged units: *Provided,* That not more than 3 percent, by count, of the units may be seriously damaged, or one unit in a single container may be seriously damaged if such unit exceeds the allowance of 3 percent: *Provided,* That in all of the containers comprising the sample such damaged units do not exceed an average of 3 percent, by count, of the total number of units.

(2) *Cut spears, bottom cuts or cuts—tips removed, and mixed.* There may be present for the applicable style not more than 10 percent, by count, of units with shattered heads, misshapen units and poorly cut units, and damaged and seriously damaged units: *Provided,* That not more than 2 percent, by count, of the units may be seriously damaged or one unit in a single container may be seriously damaged if such unit exceeds the allowance of 2 percent: *Provided,* That in all of the containers comprising the sample such damaged units do not exceed an average of 2 percent, by count, of the total number of units.

(c) (*C*) *classification.* If the canned asparagus is fairly free from defects, a score of 21 to 24 points may be given. Canned asparagus that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that not more than a trace of grit or silt may be present that affects the appearance or edibility of the product; that loose material may be present that does not seriously affect the appearance of the product; and that with respect to the following styles of canned asparagus:

(1) *Spears, tips, and points.* There may be present with respect to green and green tipped types not more than 20 percent, and with respect to green tipped and white and white types not more than 30 percent, by count, of units with shattered heads, misshapen units, and poorly cut units, and damaged and seriously damaged units: *Provided,* That not more than 10 percent, by count, of the units may be seriously damaged, or one unit in a single container may be seriously damaged if such unit exceeds the allowance of 10 percent: *Provided,* That in all of the containers comprising the sample such damaged units do not exceed an average of 10 percent, by count, of the total number of units.

(2) *Cut spears, bottom cuts or cuts—tips removed, and mixed.* There may be present for the applicable style not more than 20 percent, by count, of units with shattered heads, misshapen units and poorly cut units, and damaged and seriously damaged units: *Provided,* That not more than 7 percent, by count, of all the units may be seriously damaged.

(d) (*SStd*) *classification.* Canned asparagus that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2555 Character.

(a) *General.* The factor of character refers to the degree of development of the head and bracts and to the tenderderness and texture of the unit.

(1) "Well developed" means that the appearance of the head is not materially affected by a seedy appearance, and is practically compact.

(2) "Fairly well developed" means that the head may show a seedy appearance over the surface of the head and the head and bracts may be elongated but not so developed or elongated as to give a definitely spread or branching appearance.

(b) (*A*) *classification.* Canned asparagus that possesses a good character may be given a score of 34 to 40 points. "Good character" has the following meanings with respect to the following styles and types of canned asparagus:

(1) *Spears, tips, and points.* Not less than 85 percent, by count, of the heads are well developed, and the remaining units are at least fairly well

developed, and with respect to green and green tipped types not more than 10 percent, and with respect to green tipped and white and white types not more than 20 percent, by count, of the units, or one unit in a container if such unit exceeds the allowances provided for the respective type, may be tough.

(2) *Cut spears and mixed.* Not less than 50 percent, by count, of the heads are well developed, and the remainder are at least fairly well developed, and with respect to green and green tipped types not more than 10 percent, and with respect to green tipped and white and white types not more than 20 percent, by count, of the units may be tough.

(3) *Bottom cuts or cuts—tips removed.* With respect to green and green tipped types not more than 10 percent, and with respect to green tipped and white and white types not more than 33⅓ percent, by count, of the units may be tough.

(c) *(C) classification.* If the canned asparagus possesses a fairly good character, a score of 28 to 33 points may be given. Canned asparagus that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" has the following meanings with respect to the following styles and types of canned asparagus:

(1) *Spears, tips, and points.* Not less than 90 percent, by count, of the heads are at least fairly well developed, and the remaining units may fail to meet the requirements for fairly well developed heads, and with respect to green and green tipped types not more than 25 percent, and with respect to green tipped and white and white types not more than 50 percent, by count, of the units may be tough.

(2) *Cut spears and mixed.* Not less than 90 percent, by count, of all the heads are at least fairly well developed, and the remainder may fail to meet the requirements for fairly well developed heads, and with respect to green and green tipped types not more than 25 percent, and with respect to green tipped and white and white types, not more than 50 percent, by count, of the units may be tough

(3) *Bottom cuts or cuts—tips removed.* With respect to green and green tipped types not more than 25 percent, and with respect to green tipped and white and white types not more than 50 percent, by count, of the units may be tough.

(d) *(SStd) classification.* Canned asparagus that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

DEFINITIONS AND EXPLANATIONS

§ 52.2556 Definitions and explanations of terms.

(a) *Head.* Head in cut spears means the tip end which has been cut from an asparagus shoot which is ⅝ inch or more in length with respect to the green type and which is ⅜ inch or more in length with respect to green tipped and white and white types, or the upper portion of a spear which possesses a substantial amount of head material which has been cut from near the tip end and which is approximately the same length as the other cut units.

(b) *Unit.* Unit means any individual portion of an asparagus shoot ⅜ inch or more in length in canned asparagus.

(c) *Percent, by count, of heads.* Percent, by count, of heads means the percent determined by averaging the percent, by count, of heads in all of the containers comprising the sample.

(d) *Tough unit*—(1) *Spears, tips, and points.* Tough unit means a unit which is not cut through in 5 seconds or less when tested by means of the fiberometer and which possesses fibrous material which is materially objectionable upon eating. When tested by means of the fiberometer the test is made at a point 1 inch from the cut end with respect to the green type and at a point 1½ inches from the cut end with respect to the green tipped type, and at the mid-point of the unit with respect to the green tipped and white and white types.

(2) *Cut spears, bottom cuts or cuts—tips removed, and mixed; containing cut spears and bottom cuts or cuts—tips removed.* Tough unit means a unit which possesses fibrous material which is materially objectionable upon eating.

(e) *Asparagus fiberometer.* The cutting wire of the fiberometer shall be 0.031 in diameter stainless steel wire and is mounted in a metal frame having an overall weight of 3 lb avoirdupois. The slots in the block supporting the asparagus unit to be tested shall be not less than 0.039 in nor more than 0.042 in in width.

LOT INSPECTION AND CERTIFICATION

§ 52.2557 Ascertaining the grade of a lot.

The grade of a lot of canned asparagus covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR 52.1 through 52.87).

SCORE SHEET

§ 52.2558 Score sheet.

Number, size, and kind of container ....
Label ....
Container mark or identification ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Type ....
Style ....
Size or sizes (Spears, tips, and points) ....
Length of cut ....
Heads (cut) (percent, by count) ....

Factors		Score points	
Liquor	10	(A)	9–10
		(C)	7–8
		(SStd)	[1] 0–6
Color	20	(A)	17–20
		(C)	14–16
		(SStd)	[1] 0–13
Defects	30	(A)	25–30
		(C)	[1] 21–24
		(SStd)	[1] 0–20
Character	40	(A)	34–40
		(C)	[1] 28–33
		(SStd)	[1] 0–27
Total score	100		

Flavor (A, C, or SStd) ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Clingstone Peaches[1]

SOURCE: 43 FR 20957, May 16, 1978, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.2561 Product description.

Canned clingstone peaches is the product represented as defined in the Standards of Identity for canned peaches (21 CFR 145.170(a) and 145.171) issued under the Federal Food, Drug and Cosmetic Act. For the purposes of the standards in this subpart, and unless the text indicates otherwise, the terms, "canned peaches" or "canned clingstone peaches" include "canned yellow clingstone peaches," "canned spiced yellow clingstone peaches," "canned 'solid-pack' yellow clingstone peaches" and "canned artificially sweetened yellow clingstone peaches" as defined in the Standards of Identity.

§ 52.2562 Styles.

(a) *"Halves" or "Halved"* canned peaches are peeled and pitted peaches, cut approximately in half along the suture from stem to apex.

(b) *"Quarters" or "Quartered"* canned peaches are halved peaches cut into two approximately equal parts.

(c) *"Slices" or "Sliced"* canned peaches are peeled and pitted peaches cut into sectors smaller than quarters.

(d) *"Dice" or "Diced"* canned peaches are peeled and pitted peaches cut into approximate cubes.

(e) *"Whole"* canned peaches are peeled, unpitted, whole peaches with or without stems removed.

(f) *"Mixed pieces of irregular sizes and shapes"* are peeled, pitted, and cut units of canned peaches that are predominantly irregular in size and shape which do not conform to a single style of halves, quarters, slices, or dice and which may consist of:

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State Laws and regulations.

(1) Units (commonly called "salad cuts" or "salad pieces") which may have been prepared originally as peach halves but which are irregular in size and shape in that more than one-fourth of the unit appears to have been removed at the outer curved surface and which have been cut further into pieces;

(2) Units which may have been prepared originally as peach slices but which are irregular in size and shape in that they have been cut further into pieces; or

(3) Mixtures of two or more of the following styles which may or may not be of normal shape: Halves, quarters, slices, or diced.

[50 FR 26966, July 1, 1985]

§ 52.2563 Grades.

(a) *"U.S. Grade A"* is the quality of halves, quarters, slices, dice, or whole canned clingstone peaches that possess similar varietal characteristics, that possess a normal flavor and odor; that possess a good color; that are practically uniform in size and symmetry for the applicable style; that are practically free from defects; that possess a good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: Provided, That halves, quarters, slices, dice, or whole canned clingstone peaches may possess a reasonably good color; may be reasonably uniform in size and symmetry; and may possess a reasonably good character, if the total score is not less than 90 points.

(b) *"U.S. Grade B"* is the quality of halves; quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a reasonably good color; that are reasonably uniform in size and symmetry for the applicable style; that are reasonably free from defects; that possess a reasonably good charcter; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: Provided, That halves, quarters, slices, dice, or whole canned clingstone peaches may be fairly uniform in size and symmetry if the total score is not less than 80 points.

(c) *"U.S. Grade C"* is the quality of halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that possess similar varietal characteristics; that possess a normal flavor and odor; that possess a fairly good color; that are fairly uniform in size and symmetry for the applicable style; that are fairly free from defects; that possess a fairly good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(d) *"U.S. Grade D"* is the quality of halves, quarters, slices, diced, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that may possess dissimilar varietal characteristics; that possess a normal flavor odor; that possess a fairly good color; that may vary in size and symmetry for the applicable style; that are fairly free from defects except for crushed and broken units in the styles of halves, quarters, or whole style; that possess a noticeable variability in character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 60 points. Canned clingstone peaches of this grade may or may not meet the minimum standards of quality for canned peaches issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(e) *"Substandard"* is the quality of canned clingstone peaches that fails to meet the applicable requirements of U.S. Grade C or of U.S. Grade D and is the quality of canned clingstone peaches that may or may not meet the minimum standards of quality for canned peaches issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[50 FR 26966, July 1, 1985]

§ 52.2564 Grades of canned "solid-pack" clingstone peaches.

(a) *"U.S. Grade C Solid-Pack"* is the quality of halves, quarters, slices, dice, or mixed pieces of irregular sizes and shapes of canned "solid-pack" clingstone peaches that possess a normal flavor and odor; that possess a fairly good color; that are fairly free from defects for canned "solid-pack" clingstone peaches; that possess a fairly good character for "solid-pack" clingstone peaches; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(b) *"Substandard Solid-pack"* is the quality of halves, quarters, slices, dice, or mixed pieces of irregular sizes and shapes of canned "solid-pack" clingstone peaches that fail to meet the requirements of "U.S. Grade C Solid-Pack."

[50 FR 26967, July 1, 1985]

§ 52.2565 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned clingstone peaches are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurements, as applicable, for the respective designations are as follows:

Designations	Brix measurements
Extra heavy sirup or extra heavily sweetened fruit juice(s) and water or extra heavily sweetened fruit juice(s).	22° or more but not more than 35°.
Heavy sirup or heavily sweetened fruit juice(s) and water or heavily sweetened fruit juice(s).	18° or more but less than 22°.
Light sirup or lightly sweetened fruit juice(s) and water or lightly sweetened fruit juice(s).	14° or more but less than 18°.
Slightly sweetened water or extra light sirup or slightly sweetened fruit juice(s) and water or slightly sweetened fruit juice(s).	10° or more but less than 14°.
In water	Not applicable.
In fruit juice(s) and water	Do.
In fruit juice(s)	Do.
Artificially sweetened	Do.

§ 52.2566 Fill of container.

The standard of fill of container for canned clingstone peaches is the maximum quantity of the peach units which can be sealed in the container and processed by heat to prevent spoilage, without crushing or breaking such ingredient. Canned clingstone peaches that do not meet this requirement are "Below Standard in Fill."

§ 52.2567 Recommended fill of container for canned "solid-pack" clingstone peaches.

The recommended fill of container for canned "solid-pack" clingstone peaches is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of "solid-pack" clingstone peaches be as full of peaches as practicable without impairment of quality and that the product (including liquid, if any) occupy not less than 90 percent of the volume of the container.

§ 52.2568 Recommended drained weights.

(a) *General.* (1) The minimum drained weight recommendations for the various applicable styles in Table I of this subpart are not incorporated in the grades of the finished product since drained weight, as such, is not factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for determining drained weight.* The drained weight of canned clingstone peaches and canned "solid-pack" clingstone peaches is determined by emptying the contents of the container, turning the pit cavities down in halves, upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-in± 3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and peaches less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404x414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definitions of symbols.* (1) X_d—The average drained weight of all the sample units in the sample.

(2) *LL*—Lower limit for drained weights of individual sample units.

(d) *Compliance with recommended drained weights.* A lot of canned clingstone peaches and canned unsweetened "solid-pack" clingstone peaches is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended average drained weight (designated as X in Table I);

(2) The number of sample units which fail to meet the recommended minimum drained weight for individuals (designated as *LL* in Table I) does not exceed the applicable acceptance number specified in the single sampling plan of Table II.

[43 FR 20957, May 16, 1978; 43 FR 25417, June 13, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.2569 Recommended fill weights.

(a) *General.* The minimum fill weight recommendations for the various styles in Table III of this subpart are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for determining fill weight.* The fill weight of canned clingstone peaches is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X_{min} means the minimum lot average fill weight.

LWL_x means the lower warning limit for subgroup averages.

LRL_x means the lower reject limit for group averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a letter on the sampling allowance chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Subgroup size.* The subgroup size for determination of fill weights shall be 5 sample units.

(e) *Compliance with recommended fill weights.* Compliance with the recommended fill weights for canned clingstone peaches shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED CLINGSTONE PEACHES

Container designation (metal, unless otherwise stated)	Container size (overall dimensions)		Overflow capacity (fluid ounces)	Sliced						Diced in any liquid medium	
				In extra heavy sirup (ounces)		In heavy sirup (ounces)		In any other liquid medium (ounces)			
	Diameter (inches)	Height (inches)		*X*	*LL*	*X*	*LL*	*X*	*LL*	*X*	*LL*
5Z	211	200		2.8	2.2	3.0	2.4	3.1	2.5	2.9	2.6
5Z	211	202		3.0	2.4	3.2	2.6	3.3	2.7	3.2	2.9
6Z	300	200		3.4	2.8	3.6	3.0	3.7	3.1	3.7	3.4
7Z	211	212		4.0	3.4	4.2	3.6	4.3	3.7	4.3	4.0
8Z tall	211	304		4.9	4.3	5.1	4.5	5.2	4.6	5.2	4.7
No. 300	300	407		8.9	8.2	9.1	8.4	9.3	8.6	9.5	8.9
No. 303	303	406		9.9	9.1	10.1	9.3	10.3	9.5	10.5	9.8
No. 303 glass			17.0	9.9	9.1	10.1	9.3	10.3	9.5	10.5	9.8
No. 2	307	409		12.0	11.1	12.3	11.4	12.6	11.7	12.7	11.9

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED CLINGSTONE PEACHES—Continued

Container designation (metal, unless otherwise stated)	Container size (overall dimensions)		Overflow capacity (fluid ounces)	Sliced						Diced in any liquid medium	
	Diameter (inches)	Height (inches)		In extra heavy sirup (ounces)		In heavy sirup (ounces)		In any other liquid medium (ounces)			
				X	LL	X	LL	X	LL	X	LL
No. 2½	401	411		17.4	16.3	17.8	16.7	18.2	17.1	18.5	17.5
No. 2½ glass			28.35	16.9	15.8	17.3	16.2	17.7	16.6	18.0	17.0
No. 10	603	700		64.5	62.5	66.5	64.5	68.5	66.5	70.0	66.

Container designation (metal, unless otherwise stated)	Heavy pack—any style in any liquid medium (ounces)		Solid pack—all applicable styles (unsweetened only) (ounces)	
	X	LL	X	LL
No. 2½	20.0	18.6	25.5	24.1
No. 10	76.0	73.5	92.0	89.5

Container designations (metal, unless otherwise stated)	Halves						Quarters, and mixed pieces of irregular sizes and shapes					
	In extra heavy sirup (ounces)		In heavy sirup (ounces)		In any other liquid medium (ounces)		In extra heavy sirup (ounces)		In heavy sirup (ounces)		In any other liquid medium (ounces)	
	X	LL	X	LL	X	LL	X	LL	X	LL	X	LL
8Z tall	5.0	4.3	5.2	4.5	5.3	4.6	5.0	4.3	5.2	4.5	5.3	4.6
No. 300	9.0	8.2	9.2	8.4	9.4	8.6	9.0	8.2	9.2	8.4	9.4	8.6
No. 303	10.0	9.1	10.2	9.3	10.4	9.5	10.0	9.1	10.2	9.3	10.4	9.5
No. 303 glass	10.0	9.1	10.2	9.3	10.4	9.5	10.0	9.1	10.2	9.3	10.4	9.5
No. 2	12.1	11.0	12.4	11.3	12.7	11.6	12.1	11.0	12.4	11.3	12.7	11.6
No. 2½ glass	17.1	15.7	17.5	16.1	17.9	16.5	17.1	15.7	17.5	16.1	17.9	16.5
No. 2½							17.6	16.2	18.0	16.6	18.4	17.0
No. 2½, 7 count or more	17.6	16.2	18.0	16.6	18.4	17.0						
No. 2½, 6 count or less	17.0	15.6	17.4	16.0	17.8	16.4						
No. 10							64.5	62.0	66.5	64.0	68.5	66.0
No. 10, 24 count or more	64.5	62.0	66.5	64.0	68.5	66.0						
No. 10, 23 count or less	63.0	60.5	65.0	62.5	67.0	64.5						

TABLE II—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29
Acceptance No	0	1	2	3	4

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED CLINGSTONE PEACHES

Container designation (metal, unless otherwise designated)	X'_{min}	LWL_x	LRL_x	LWL	LRL	R[1]	R[1]	Sampling allowance code
Halves								
8Z tall	5.4	4.9	4.7	4.4	3.9	1.2	2.5	I
No. 300	9.6	9.0	8.7	8.3	7.6	1.5	3.2	L
No. 303 glass	10.6	10.0	9.6	9.2	8.5	1.6	3.4	M
No. 303	10.6	10.0	9.6	9.2	8.5	1.6	3.4	M
No. 2	12.9	12.2	11.8	11.3	10.5	1.9	3.9	O
No. 2½ glass	18.2	17.3	16.9	16.2	15.2	2.3	4.9	S
No. 2½, 7 count or more	18.7	17.8	17.4	16.7	15.7	2.3	4.9	S
No. 2½, 6 count or less	18.0	17.1	16.7	16.0	15.0	2.3	4.9	S

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED CLINGSTONE PEACHES—Continued

Container designation (metal, unless otherwise designated)	$\bar{X}_{min}$	LWL_s	LRL_s	LWL	LRL	R^1	R^1	Sampling allowance code
No. 10, 24 count or more	70.5	69.0	68.2	67.1	65.4	4.0	8.4	Z
No. 10, 23 count or less	69.0	67.5	66.7	65.6	63.9	4.0	8.4	Z
Sliced—fill weight values (ounces)								
6Z	4.0	3.6	3.4	3.2	2.8	9	1.9	G
8Z tall	5.4	5.0	4.8	4.4	4.0	1.0	2.1	H
No. 300	9.7	9.2	8.9	8.5	7.9	1.4	3.0	K
No. 303 glass	10.7	10.1	9.8	9.4	8.7	1.5	3.2	L
No. 303	10.7	10.1	9.8	9.4	8.7	1.5	3.2	L
No. 2	13.1	12.4	12.1	11.6	10.9	1.7	3.7	N
No. 2½	19.0	18.2	17.8	17.2	16.3	2.1	4.4	Q
No. 2½ glass	18.5	17.7	17.3	16.7	15.8	2.1	4.4	Q
No. 10	72.0	70.6	69.8	68.8	67.2	3.7	7.9	Y
Quarters—fill weight values (ounces)								
8Z tall	5.5	5.1	4.9	4.6	4.1	1.1	2.2	H
No. 300	9.9	9.4	9.1	8.7	8.1	1.4	3.0	K
No. 303 glass	11.0	10.4	10.1	9.7	9.0	1.5	3.2	L
No. 303	11.0	10.4	10.1	9.7	9.0	1.5	3.2	L
No. 2	13.3	12.6	12.3	11.8	11.0	1.7	3.7	N
No. 2½ glass	18.8	18.0	17.6	17.0	16.1	2.1	4.4	Q
No. 2½	19.3	18.5	18.1	17.5	16.6	2.1	4.4	Q
No. 10	74.0	72.6	71.8	70.8	69.2	3.7	7.9	Y
Diced—fill weight values (ounces)								
5 oz	3.4	3.2	3.0	2.9	2.6	60	1.20	D
5 oz	3.7	3.5	3.3	3.2	2.9	.60	1.20	D
6 oz	4.3	4.1	3.9	3.8	3.5	.60	1.20	D
7 oz	5.0	4.8	4.6	4.5	4.2	.60	1.20	D
8Z tall	6.1	5.9	5.7	5.6	5.3	60	1.20	D
No. 300	10.6	10.2	10.0	9.8	9.4	90	2.0	G
No. 303	11.7	11.3	11.1	10.8	10.3	1.1	2.2	H
No. 303 glass	11.7	11.3	11.1	10.8	10.3	1.1	2.2	H
No. 2	14.3	13.8	13.6	13.3	12.8	1.2	2.5	I
No. 2½	20.7	20.2	20.0	19.6	19.0	1.3	2.7	J
No. 2½ glass	20.2	19.7	19.5	19.1	18.5	1.3	2.7	J
No. 10	77.0	75.9	75.4	74.6	73.4	2.8	5.9	U
Mixed pieces of irregular sizes and shapes—fill weight values (ounces)								
No. 2½	19.3	18.5	18.1	17.5	16.6	2.1	4.4	Q
No.10	74.0	72.6	71.8	70.8	69.2	3.7	7.9	Y
Spiced, whole—fill weight values (ounces)								
No. 2½ 6 count or less	17.0	15.9	15.4	14.6	13.4	2.8	5.9	U
No. 2½ 7 count or more	17.5	16.4	15.9	15.1	13.9	2.8	5.9	U
No. 10	70.0	68.2	67.3	66.0	64.0	4.7	9.8	CI
Heavy pack halves, sliced, mixed pieces of irregular sizes and shapes—fill weight values (ounces)								
No. 10	86.0	84.8	84.2	83.4	82.1	3.0	6.4	V

[43 FR 20957, May 16, 1978; 43 FR 25417, June 13, 1978. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.2570 Ascertaining the grade.

(a) "*General.*" In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) Factors not rated by score points in canned clingstone peaches other than "solid-pack" clingstone peaches are:

(i) Varietal characteristics.

(ii) Flavor and odor.

(2) Factor not rated by score points in "solid-pack" clingstone peaches: Flavor and odor.

(3) Factors rated by score points. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
(i) Color	20
(ii) Uniformity of size and symmetry	20
(iii) Absence of defects	30
(iv) Character	30
Total score	100

(b) *Definition of flavor and odor.* "Normal flavor and odor" means that the canned peaches are free from objectionable flavors and odors of any kind.

[50 FR 26967, July 1, 1985]

§ 52.2571 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means "18, 19, or 20 points").

[50 FR 26967, July 1, 1985]

§ 52.2572 Color.

(a) *"General."* (1) The color of canned clingstone peaches other than canned "spiced" peaches refers to the predominant and characteristic color on the surface of whole units, and the outside surfaces of other units, except the cut surfaces of such units are also considered when adversely affected by discoloration. Units other than whole on which the pit cavity is abnormally discolored are considered under the factor of absence of defects only.

(2) The factor of color for canned "spiced" peaches is not based on any detailed requirement and is not scored but the color shall be normal for canned "spiced" peaches; the other three factors (uniformity of size and symmetry, absence of defects, and character as applicable) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) *"A" classification.* Canned clingstone peaches that possess a good color may be given a score of 18 to 20 points. Mixed pieces of irregular sizes and shapes that score 18 to 20 points shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Good color" means that the peaches possess a bright color ranging from yellowish orange to orange yellow; and that there may be present units which possess "reasonably good color" as follows:

(1) In the style of halves, quarters, slices, or whole, not more than 10 percent, by count, of the units may possess "reasonably good color"; or one unit in a container is permitted to possess "reasonably good color": *Provided,* That in all containers comprising the sample such units do not exceed an average of 10 percent of the total number of units; and

(2) In the styles of dice or mixed pieces of irregular sizes and shapes, not more than 10 percent, by weight, of the drained peaches may possess "reasonably good color".

(c) *"B" classification.* Canned clingstone peaches that possess a reasonably good color may be given a score of 16 or 17 points. Mixed pieces of irregular sizes and shapes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably good color" means that the canned clingstone peaches possess a reasonably bright color that may fail to meet minimum color requirements for Grade A but is equal to or better than light orangish-yellow; that the units may possess slight discoloration due to oxidation, pit pigmentation, or other causes which does not more than slightly affect the appearance or edibility, or both, of the product; and that there may be present units which possess "fairly good color" as follows:

(1) In the style of halves, quarters, slices, or whole, not more than 10 per-

cent, by count, of the units may possess "fairly good color;" or one unit in a container is permitted to possess "fairly good color;" Provided, That in all containers comprising the sample such units do not exceed an average of 10 percent of the total number of units; and

(2) In the style of dice or mixed pieces of irregular sizes and shapes, not more than 10 percent, by weight, of the drained peaches may possess "fairly good color."

(d) *"C," "D", and "C-SP" classification.* Canned clingstone peaches and canned solid-pack clingstone peaches that possess a fairly good color may be given a score of 14 or 15 points. Canned clingstone peaches or canned "solid-pack" clingstone peaches that fall into this classification shall not be graded above U.S. Grade C or U.S. Grade C Solid-Pack, whichever is applicable, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the peaches possess a color that may fail to meet minimum color requirements for Grade B, but is equal to or better than greenish-yellow; that the units may possess slight discoloration due to oxidation, pit pigmentation or other causes which do not materially affect the appearance or edibility, or both, of the product; and that the units may possess other color as follows:

(1) In the style of halves, quarters, slices, or whole, not more than 10 percent, by count, of the units may fail to meet the minimum color for Grade C or may be off-color; or one unit in a container is permitted to possess such color; Provided, That in all containers comprising the sample such units do not exceed an average of 10 percent of the total number of units.

(2) In the style of dice or mixed pieces of irregular sizes and shapes, not more than 10 percent, by weight, of the drained peaches may consist of units that fail to meet the minimum color for grade C or may be off-color: Provided, That such units do not materially affect the appearance of the product.

(e) *"SStd" and "SStd-SP" classification.* Canned clingstone peaches and canned "solid-pack" clingstone peaches that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard or Substandard Solid-Pack, whichever is applicable, regardless of the total score for the product (this is a limiting rule).

[50 FR 26967, July 1, 1985]

§ 52.2573 Uniformity of size and symmetry.

(a) *General.* The factor of uniformity of size and symmetry for mixed pieces of irregular sizes and shapes of canned clingstone peaches and all applicable styles of canned "solid-pack" clingstone peaches is not based on any detailed requirements and is not scored; the other three factors (color, absence of defects, and character, as applicable) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) *Off-suture cuts.* "Off-suture cut" in halved or quartered canned clingstone peaches means a halved or quartered unit which has been cut at a distance from the suture greater than three-eighths inch at the widest measurement from the suture.

(c) *Partially detached or detached piece.* A "partially detached or detached piece" in halved canned clingstone peaches means a unit which has the appearance of a slice resulting from an off-suture cut or from improper cutting and which may or may not be attached to the half from which cut. In determining the applicable allowances in terms of percentage by count, a partially detached piece together with the half to which it is partially attached is considered as one unit or a detached piece with the half from which detached or together with any other half is considered as one unit.

(d) *Partial slice.* A "partial slice" in the style of slices is a unit that has had the semblance of a slice with respect to thickness and shape but is less than three-fourths of an apparent full slice and that does not bear marks of crushing. In determining the allowances in terms of percentage by count, partial slices aggregating the equivalent of an average size slice shall be considered as one unit.

(e) *Sliver.* A "sliver" in the style of slices is a sector that is substantially smaller than the general size of slices or that weighs 3 grams or less.

(f) *Slab.* A "slab" in the style of slices is a portion of a unit which does not conform to the shape of a definite slice due to improper cutting.

(g) *"A" Classification.* Halves, quarters, slices, dice, or whole canned clingstone peaches that are practically uniform in size and symmetry may be given a score of 18 to 20 points. "Practically uniform in size and symmetry" has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters, and whole.* The units are very symmetrical and the weight of the largest full-size unit does not exceed the weight of the smallest full-size unit by more than 40 percent; the weight of each half is not less than three-fifths oz; the weight of each quarter is not less than three-tenths oz; and not more than 10 percent, by count, of the units in the style of halves or quarters may possess off-suture cuts or partially detached or detached pieces, or any combination thereof. One unit in a container is permitted to possess an off-suture cut or partially detached or detached piece if such unit exceeds the allowance of 10 percent, by count: Provided, That in all containers comprising the sample such units do not exceed an average of 10 percent of the total number of units.

(2) *Slices.* Not more than a total of 5 percent, by count, of the units may be partial slices, slivers, and slabs: Provided, That not more than 2½ percent, by count, are slabs; and excluding partial slices, slivers, and slabs that may be present, the variation is size and symmetry of the other units does not affect more than slightly the appearance of the product.

(3) *Dice.* Not more than 10 percent, by weight, of the drained clingstone peaches may be units that are more than three-fourths inch in their greatest edge dimension or are of such size as to pass through a five-sixteenth inch square opening.

(h) *"B" Classification.* Halves, quarters, slices, dice, or whole canned clingstone peaches that are reasonably uniform in size and symmetry may be given a score of 16 or 17 points. "Reasonably uniform in size and symmetry" has the following meanings with respect to the following styles of canned clingstone peaches.

(1) *Halves, quarters, and whole.* The units are reasonably symmetrical and the weight of the largest full-size unit does not exceed the weight of the smallest full-size unit by more than 60 percent; the weight of each half is not less than three-fifths oz; the weight of each quarter is not less than three-tenths oz; and not more than 20 percent, by count, of the units in the style of halves or quarters may possess off-suture cuts or partially detached or detached pieces, or any combination thereof. One unit in a container is permitted to possess an off-suture cut or partially detached or detached piece if such unit exceeds the allowance of 20 percent, by count: *Provided,* That in all containers comprising the sample such units do not exceed an average of 20 percent of the total number of units.

(2) *Slices.* Not more than a total of 10 percent, by count, of the units may be partial slices, slivers, and slabs: Provided, That not more than 5 percent, by count, are slabs; and excluding partial slices, slivers, and slabs that may be present, the variation in size and symmetry of the other unit does not more than materially affect the appearance of the product.

(3) *Dice.* Not more than 15 percent, by weight, of the drained clingstone peaches may be units that are more than three-fourths inch in their greatest edge dimension or are of such size as to pass through a five-sixteenth inch square opening.

(i) *"C" Classification.* Halves, quarters, slices, dice, or whole canned clingstone peaches that are fairly uniform in size and symmetry may be given a score of 14 or 15 points. Canned clingstone peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Fairly uniform in size and symmetry" has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters, and whole.* The units may vary in size, thickness, and symmetry and the weight of the largest full-size unit may be not more than twice the weight of the smallest full-size unit; the weight of each half is not less than three-fifths oz; the weight of each quarter is not less than three-tenths oz; and not more than 40 percent, by count, of the units in the style of halves or quarters may possess off-suture cuts or partially detached or detached pieces, or any combination thereof: *Provided,* That the presence of such units does not give the appearance of canned peaches of "Mixed Pieces of Irregular Sizes and Shapes" or canned peaches that are "Unevenly Trimmed."

(2) *Slices.* Not more than a total of 20 percent, by count, of the units may be partial slices, slivers, and slabs: Provided, That not more than 10 percent, by count, are slabs; and excluding partial slices, slivers, and slabs that may be present, the balance of slices may vary noticeably in size, thickness and symmetry.

(3) *Dice.* Not more than 20 percent, by weight, of the drained clingstone peaches may be units that are more than three-quarters inch in their greatest edge dimension or are of such size as to pass through a five-sixteenth inch square opening.

(j) *"D" and "SStd" Classification.* Canned clingstone peaches of the applicable styles which fail to meet paragraph (i) of this section may be given a score of 0 to 13 points and shall not be graded above the following stated grade, regardless of the total score for the product (this is a limiting rule):

(1) Halves, quarters, or whole canned clingstone peaches in which the weight of the largest full-size unit is more than twice the weight of the smallest full-size unit shall not be graded above U.S. Grade D and are also "Below Standard in Quality—Mixed Sizes."

(2) Halves of canned clingstone peaches in which the weight of any half is less than three-fifths oz shall not be graded above U.S. Grade D and are also "Below Standard in Quality—Small Halves."

(3) Quarters of canned clingstone peaches in which the weight of any quarter is less than three-tenths oz shall not be graded above U.S. Grade D and are also "Below Standard in Quality—Small Quarters."

(4) Slices and dice canned clingstone peaches shall not be graded above U.S. Grade D.

[50 FR 26968, July 1, 1985]

§ 52.2574 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material (such as stems or leaves and portions thereof), from pit material, from units that are crushed or broken for the applicable style, and from any other defects which detract from the appearance or edibility of the product.

(a) *Blemished.* "Blemished" or "blemished units" means units that are blemished with scab, hail injury, discoloration, or other abnormality which affects materially the appearance or edibility, or both, of the unit.

(2) *Crushed or broken.* "Crushed or broken" means that:

(i) A unit in halves, quarters, or whole style of canned clingstone peaches is "crushed" if the unit has definitely lost its normal shape and bears marks of crushing or is otherwise crushed not due to ripeness; and

(ii) A unit in halves, quarters, or whole style of canned clingstone peaches is "broken" if severed into definite parts; halves of canned clingstone peaches that are slightly or partially split from the edge to the pit cavity are not considered broken. Portions equivalent to a full-size unit that has been broken are considered as one unit in determining the percentage by count.

(3) *Pit material.* "Pit material" means any whole pit in all styles other than whole style or any portion of a peach pit, regardless of size, except when whole peach pits or peach kernels are permitted as seasoning ingredients in other than whole style.

(b) *"A" classification.* Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that are practically free from defects may be given a score of 27 to 30 points. Mixed pieces of irregular sizes and shapes of canned clingstone peaches that score 27 to 30 points shall not be graded above U.S. Grade B regardless of the total score for the product (this is a partial limiting rule). "Practically free from defects" means that the canned clingstone peaches are practically free from pit material, from harmless extraneous material, and from any defects not specifically mentioned that affect the appearance or edibility of the product, and in addition, has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters; and whole.* Not more than an average of one-eighth square inch of peel for each pound of total contents may be present; not more than 5 percent, by count, of the units may be crushed, or broken; and not more than 5 percent, by count, of the units may be blemished. One unit in a container is permitted to be crushed or broken and one unit in a container is permitted to be blemished if any of such units exceeds the respective allowances of 5 percent by count; Provided, That in all containers comprising the sample such crushed or broken units do not exceed an average of 5 percent of the total number of units and such blemished units do not exceed an average of 5 percent of the total number of units.

(2) *Sliced.* Not more than an average of one-eighth square inch of peel for each pound of total contents may be present; and not more than 3 percent, by count, of the units may be blemished. One unit in a container is permitted to be blemished if such unit exceeds the allowance of 3 percent by count: Provided, That in all containers comprising the sample such blemished units do not exceed an average of 3 percent of the total number of units.

(3) *Dice.* Not more than an average of one-eighth square inch of peel for each pound of total contents may be present; and not more than 3 percent, by weight, of drained clingstone peaches may consist of units that are blemished.

(4) *Mixed pieces of irregular sizes and shapes.* Not more than an average of one-eighth square inch of peel for each pound of total contents may be present; and not more than 1 blemished unit for each 32 oz of total contents may be present.

(c) *"B" classification.* Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that are reasonably free from defects may be given a score of 24 to 26 points. Canned clingstone peaches that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the canned clingstone peaches are practically free from pit material, are reasonably free from harmless extraneous material and from any defects not specifically mentioned that affect the appearance or edibility of the product, and in addition, has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters, and whole.* Not more than an average of one-half square inch of peel for each pound of total contents may be present; not more than 5 percent, by count, of the units may be crushed, or broken; and not more than 10 percent, by count, of the units may be blemished. One unit in a container is permitted to be crushed or broken and one unit in a container is permitted to be blemished if any of such units exceed the respective allowances of 5 percent and 10 percent, by count: Provided, That in all containers comprising the sample such crushed or broken units do not exceed an average of 5 percent of the total number of units and such blemished units do not exceed an average of 10 percent of the total number of units.

(2) *Sliced.* Not more than an average on one-half square inch of peel for each pound of total contents may be present; and not more than 6 percent by count, of the units may be blemished. One unit in a single container is permitted to be blemished if such unit exceeds the allowance of 6 percent, by count: Provided, That in all containers comprising the sample such blemished units do not exceed an average of 6 percent of the total number of units.

(3) *Dice.* Not more than an average of one-half square inch of peel for each pound of total contents may be present; and not more than 6 percent, by weight, of drained clingstone peaches may consist of units that are blemished.

(4) *Mixed pieces of irregular sizes and shapes.* Not more than an average of one-half square inch of peel for each pound of total contents may be present; and not more than 1 blemished unit for each pound of total contents may be present.

(d) *"C" classification.* Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that are fairly free from defects may be given a score of 21 to 23 points. Canned clingstone peaches that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the canned clingstone peaches are practically free from pit material; are fairly free from harmless extraneous material and from any defects not specifically mentioned that affect the appearance or edibility of the product; and in addition, has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters, and whole.* Not more than an average of one square inch of peel for each pound of total contents may be present; not more than 5 percent, by count, of the units may be crushed or broken; and not more than 20 percent, by count, of the units may be blemished. One unit in a container is permitted to be crushed or broken and one unit in a container is permitted to be blemished if any of such units exceed the respective allowances of 5 percent and 20 percent, by count: *Provided,* That in all containers comprising the sample such crushed or broken units do not exceed an average of 5 percent of the total number of units and such blemished units do not exceed an average of 20 percent of the total number of units.

(2) *Slices, dice, and mixed pieces of irregular sizes and shapes.* Not more than an average of one square inch of peel for each pound of total contents may be present; and not more than 20 percent, by count, of the units may be blemished.

(e) *"D" classification.* Canned clingstone peaches of any style which fail to met the requirements of paragraph (d) of this section but which meet the requirements of this paragraph may be given a score of 0 to 20 points and shall not be graded above U.S. Grade D, regardless of the total score for the product (this is a limiting rule). Halves, quarters, or whole canned clingstone peaches that are thereby U.S. Grade D may also be "Below Standard in Quality—Blemished" or "Partly Crushed or Broken" or "Unevenly Trimmed", or combinations thereof. Canned clingstone peaches of U.S. Grade D with respect to "absence of defects" are practically free from pit material, are fairly free from harmless extraneous material and from any defects not specifically mentioned that affect materially the appearance or edibility of the product, and in addition:

(1) Not more than an average of one square inch of peel for each pound of total contents may be present;

(2) In the style of halves, quarters, or whole, any amount of crushed or broken units may be present; and

(3) Not more than 20 percent, by count, of the units may be blemished. One unit in a container is permitted to be blemished if such unit exceeds the allowance of 20 percent, by count: Provided, That in all containers comprising the sample such blemished units do not exceed an average of 20 percent of the total number of units.

(f) *"SStd" classification.* Canned clingstone peaches that fail to meet the applicable requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above the following stated grades, as applicable, regardless of the total score for the product (this is a limiting rule).

(1) Halves, quarters, or whole canned clingstone peaches shall not be graded above Substandard and may also be "Below Standard in Quality" for the applicable reasons:

(i) Not well peeled;

(ii) Partly crushed or broken;

(iii) Unevenly trimmed;

(iv) Blemished.

(2) Slices, dice, or mixed pieces of irregular sizes and shapes of canned clingstone peaches shall not be graded above Substandard and may also be "Below Standard in Quality" for the applicable reasons:

(i) Not well peeled;

(ii) Blemished.

(g) *"C-SP" classification.* Halves, quarters, slices, dice, or mixed pieces of irregular sizes and shapes of canned "solid-pack" clingstone peaches that are fairly free from defects for canned "solid-pack" clingstone peaches may be given a score of 21 to 23 points. Canned "solid-pack" clingstone peaches that fall into this classification shall not be graded above U.S. Grade C Solid-Pack, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects for canned 'solid-pack' clingstone peaches" means that the canned "solid-pack" clingstone peaches are practically free from pit material, are fairly free from harmless extraneous material and from any defects not specifically mentioned that affect the appearance or edibility of the product, and in addition, there may be present:

(1) Not more than an average of one square inch of peel for each pound of total contents; and

(2) Not more than 2 blemished units for each pound of total contents.

(h) *"SStd-SP" classification.* Halves, quarters, slices, dice, or mixed pieces of irregular sizes and shapes of canned "solid-pack" clingstone peaches that fail to meet the requirements of paragraph (g) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard Solid-Pack, regardless of the total score for the product (this is a limiting rule).

[50 FR 26969, July 1, 1985]

§ 52.2575 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture, and tenderness of the product.

(b) *"A" classification.* Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that possess a good character may be given a score of 27 to 30 points. Mixed pieces of irregular sizes and shapes of canned clingstone peaches that score 27 to 30 points shall not be graded above U.S. Grade B regardless of the total score for the product (this is a partial limiting rule). "Good character" has the following meanings with respect to the various styles of canned clingstone peaches:

(1) *Halves, quarters, slices, and mixed pieces of irregular sizes and shapes.* The units are pliable and possess a tender, fleshy texture typical of mature, well-ripened, properly prepared, and properly processed canned clingstone peaches; the units are intact and possess reasonably well-defined edges; and not more than 10 percent, by count, of the units may possess a "reasonably good character". One unit in a container is permitted to possess a "reasonably good character" if such unit exceeds the allowance of 10 percent, by count: Provided, That the appearance or eating quality, or both, is not more than slightly affected by the character of such unit.

(2) *Dice.* The product generally possesses a texture typical of mature, well-ripened, properly prepared, and properly processed canned clingstone peaches; not more than 3 percent, by weight, of the drained clingstone peaches may be excessively frayed or mushy; and the product is otherwise reasonably free from crushed units.

(3) *Whole.* The units possess a tender texture typical of mature, well-ripened, properly prepared, and properly processed canned clingstone peaches; the units are uniformly intact and firm; and not more than 10 percent, by count, of the units may possess a "reasonably good character".
One unit in a container is permitted to possess a "reasonably good character" if such unit exceeds the allowance of 10 percent, by count: Provided, That the appearance or eating quality, or both, is not more than slightly affected by the character of such unit.

(c) *"B" classification.* Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that possess a reasonably good character may be given a score of 24 to 26 points. Mixed pieces of irregular sizes and shapes of canned clingstone peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably good character" has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters, slices, and mixed pieces of irregular sizes and shapes.* The units possess a texture typical of mature, properly ripened, properly prepared, and properly processed canned clingstone peaches; the texture is reasonably fleshy, and the units are reasonably tender or the tenderness may be variable within the unit; the units are reasonably intact with not more than slightly frayed edges and may be slightly firm or slightly soft but are not mushy; and not more than 10 percent, by count, of the units may possess a fairly good character. One unit in a container is permitted to possess such fairly good character if such unit exceeds the allowance of 10 percent, by count: *Provided,* That the appearance or eating quality, or both, is not affected materially by the character of such unit.

(2) *Dice.* The product generally possesses a texture typical of mature, properly ripened, properly prepared, and properly processed canned clingstone peaches; not more than 5 percent by weight, of the drained clingstone peaches may be excessively frayed or mushy; and the product is otherwise reasonably free from crushed units.

(3) *Whole.* The units possess a texture typical of mature, properly ripened, properly prepared, and properly processed canned clingstone peaches; the units are reasonably tender or the tenderness may be variable within the unit; the units may be slightly firm or slightly soft but are not mushy; and not more than 10 percent by count of the units may possess a fairly good character, except for mushy or "not tender" units. One unit in a container is permitted to possess such fairly good character if such unit exceeds the allowance of 10 percent, by count: Provided, That the appearance or eating quality, or both, is not affected materially by the character of such unit.

(d) *"C" classification.* Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that possess a fairly good character may be given a score of 21 to 23 points. Canned clingstone peaches that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly good character" has the following meanings with respect to the following styles of canned clingstone peaches:

(1) *Halves, quarters, slices, and mixed pieces of irregular sizes and shapes.* The units possess a texture typical of mature, properly prepared, and properly processed canned clingstone peaches which may be variable in fleshiness but the texture is fairly fleshy; the units may be lacking uniformity of tenderness; the units may be frayed but not excessively frayed or may be soft; and not more than 10 percent, by weight, of the drained clingstone peaches may be mushy or units that are so firm as to be "not tender."

(2) *Dice.* The product generally possesses a texture typical of mature, properly prepared, and properly processed canned clingstone peaches; not more than 10 percent, by weight, of the drained clingstone peaches may be excessively frayed or mushy or are so firm as to be "not tender;" and the product is otherwise fairly free from crushed units.

(3) *Whole.* The units possess a texture typical of mature, properly prepared, and properly processed canned clingstone peaches which may be variable; the units may be lacking uniformity of tenderness; the units may be markedly firm or markedly ragged or soft; and not more than 10 percent, by count, of the units may be mushy or so firm as to be "not tender." One unit in a container is permitted to be mushy or "not tender" if such unit exceeds the allowance of 10 percent, by count: Provided, That in all containers comprising the sample, such units do not exceed an average of 10 percent of the total number of units.

(e) *"D" classification.* Canned clingstone peaches of any style that meet the requirements of paragraph (d) of this section with respect to units that are so firm as to be "not tender" but which otherwise possess a noticeably variable texture with not more than 25 percent, by weight, of the drained canned clingstone peaches that consist of mushy fruit may be given a score of 0 to 20 points and shall not be graded above U.S. Grade D, regardless of the total score for the product (this is a limiting rule).

(f) *"SStd" classification.* Canned clingstone peaches of any style that fail to meet the applicable requirements of paragraph (d) or (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule). Halves, quarters, slices, dice, whole, or mixed pieces of irregular sizes and shapes of canned clingstone peaches that are "not tender" are also "Below Standard in Quality—Not Tender."

(g) *"C-SP" classification.* Halves quarters, slices, dice, or mixed pieces of irregular sizes and shapes of canned "solid-pack" clingstone peaches that possess a fairly good character for canned "solid-pack" clingstone peaches may be given a score of 21 to 23 points. Canned "solid-pack" clingstone peaches that fall into this classification shall not be graded above U.S. Grade C Solid-Pack regardless of the total score for the product (this is a limiting rule). "Fairly good character for canned 'solid-pack' clingstone peaches" means the product generally possesses a texture of properly prepared and properly processed "solid-pack" clingstone peaches which may be variable in tenderness, may be soft, or may consist of fairly firm units.

(h) *"SStd-SP" classification.* Halves, quarters, slices, dice, or mixed pieces of irregular size and shapes of canned "solid-pack" clingstone peaches that fail to meet the requirements of paragraph (g) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard Solid-Pack, regardless of the total score for the product (this is a limiting rule).

[50 FR 26971, July 1, 1985]

§ 52.2576 Ascertaining the grade of a lot.

The grade of a lot of canned clingstone peaches covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR 52.1 to 52.83).

[50 FR 26972, July 1, 1985]

Subpart—United States Standards for Grades of Canned Freestone Peaches

SOURCE: 44 FR 36364, June 22, 1979, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2601 Product description.

Canned freestone peaches is the product represented as defined in the Standards of Identity for canned peaches (21 CFR 145.170 and 145.171) issued under the Federal Food, Drug, and Cosmetic Act. For the purposes of the standards in this subpart, and unless the text indicates otherwise, the terms "canned peaches" or "canned freestone peaches" include "canned yellow freestone peaches," "canned spiced yellow freestone peaches," "canned 'solid-pack' yellow freestone peaches" and "canned artificially sweetened yellow freestone peaches" as defined in the Standards of Identity.

§ 52.2602 Styles.

(a) *"Whole"* consists of peeled, whole peaches with or without stems removed.

(b) *"Halves" or "Halved"* consists of peeled and pitted peaches cut approximately in half along the suture from stem to apex.

(c) *"Quarters" or "Quartered"* consists of halved peaches cut into two approximately equal parts.

(d) *"Slices" or " Sliced"* consists of peeled and pitted peaches cut into wedge-shaped sectors.

(e) *"Dice" or "Diced"* consists of peeled and pitted peaches cut into cube-like parts.

(f) *"Halves and pieces"* consists of peeled and pitted peaches in which more than 50 percent, by weight, of the peaches are halves.

(g) *"Pieces," "Irregular pieces,"* or *"Mixed pieces of irregular sizes and shapes,"* consists of peeled, pitted peaches of irregular sizes and shapes or peaches that do not conform to any of the foregoing styles.

§ 52.2603 Definitions of terms.

(a) *Acceptable Quality Level (AQL).* The maximum percent of defective units or the maximum number of defects per hundred units of product that, for the purpose of acceptance sampling, can be considered satisfactory as a process average.

(b) *Blemished* means any unit that is affected by scab, hail injury, or discoloration to the extent that the appearance or eating quality is affected:

(1) Slightly;

(2) Materially;

(3) Seriously.

(c) *Brightness* means the extent that the overall appearance of the sample unit as a mass is dulled by oxidation, pigmentation, or other causes.

(1) Grades A and B—slightly affected.

(2) Grade C—materially affected.

(3) Substandard—fails Grade C.

(d) *Character* refers to the texture and tenderness of the product as follows:

(1) *Good character*—(i) *Whole.* The units have a texture typical of properly prepared and processed peaches; the units are at least reasonably tender or the tenderness may be variable within the unit; the units may be slightly hard or slightly soft.

(ii) *Halves; halves and pieces; quarters; slices; pieces or irregular pieces.* The units have at least a reasonably tender texture typical of properly prepared and processed freestone peaches and may be soft and materially frayed. The peach halves may have a tendency to flatten.

(iii) *Diced.* The product generally has at least a reasonably tender texture typical of properly prepared and processed peaches; the units are intact and not excessively frayed.

(2) *Fairly good character*—(i) *Whole.* The units have a fairly tender texture typical of properly prepared and processed peaches; the units may be lacking in uniformity of tenderness and may be substantially hard or very soft.

(ii) *Halves; halves and pieces; quarters; slices; pieces or irregular pieces.* The units have at least a fairly tender texture typical of properly prepared and processed freestone peaches and may lack uniformity of tenderness. The units may be very soft but not frayed to the extent that their normal shape is destroyed; the units may also be substantially firm.

(iii) *Diced.* The product generally has a fairly tender texture typical of properly prepared and processed peaches. The units are intact and may be frayed.

(3) *Poor character—All styles.* The units fail the requirements for fairly good character.

(e) *Color*—(1) *General.* The color of canned yellow freestone peaches, other than canned "spiced" peaches, refers to the predominant and characteristic color on the surface of whole units, and the outside surfaces of other units. The cut surfaces of such units are also considered when adversely affected by discoloration.

(2) *Individual unit color classifications*—(i) *Good color* means peach units that are equal to or better than light orangish-yellow.

(ii) *Fairly good color* means peach units that fail to meet minimum color requirements for "good color" but are equal to or better than greenish-yellow.

(iii) *Poor color* means peach units that fail to meet minimum color requirements for "fairly good color."

(f) *Crushed or broken* in the styles of whole, halves, and quarters means:

(1) A unit is "crushed" if it has definitely lost its normal shape and is crushed not due to ripeness;

(2) A unit is "broken" if severed into definite parts. Any unit in halves style that is split from the edge to the pit cavity is not considered broken.

(g) *Defect.* Any nonconformance of a unit(s) of product from a specified requirement of a single quality characteristic.

(h) *Extraneous vegetable material*—(1) *Small pieces* mean long stems, pieces of twigs not more than 51 mm (2.0 in.) in length, or leaf material or portions thereof.

(2) *Short stem* means the woody stem that attaches the peach to the twig of the tree and is 3 mm (0.12 in.) to 10 mm (0.39 in.) in length. Dark brown stems less than 3 mm (0.12 in.) in length are also considered as short stems.

(i) *Flavor and odor. "Normal flavor and odor"* means that the canned peaches are free from objectionable flavors and odors of any kind.

(j) *Mechanical damage*— (1) *Partial slice*, in the style of slices, is a unit that has a semblance of a slice with respect to thickness and shape but is less than three-fourths of an apparent full slice and that does not bear marks of crushing. Pieces are reassembled to equal an average full size slice and counted as one unit.

(2) *Detached piece*, in the style of halves and quarters, is a piece that has the appearance of a slice resulting from an off-suture cut or other improper cutting.

(3) *Gouges* mean holes or gouges that do not destroy the normal configuration of the unit but affect the appearance of the unit:

(i) Slightly;
(ii) Materially;
(iii) Seriously.

(4) *Off-suture cut*, in the styles of halves and quarters, is a unit that has been cut at a distance from the suture greater than 10 mm (0.39 in.) at the widest measurement and the appearance is affected:

(i) Slightly;
(ii) Materially;
(iii) Seriously.

(5) *Partially detached piece*, in the styles of halves and quarters, is a piece that has the appearance of a slice resulting from an off-suture cut or other improper cutting. The defect is attached to the half or quarter from which cut, but must be detached more than one-third of the length of the half or quarter along the suture approximately parallel with the suture.

(6) *Other mechanical damage* means a unit, in the styles of whole, halves and quarters, that is damaged to the extent that the shape of the unit is affected:

(i) Slightly;
(ii) Materially;
(iii) Seriously.

(k) *Peel* means all of the outer layer of the peach that is normally removed during processing.

(l) *Sample unit size* means the amount of product specified to be used for inspection. It may be:

(1) The entire contents of a container;

(2) A portion of the contents of a container;

(3) A combination of the contents of 2 or more containers;

(4) A portion of unpacked product.

(m) *Shelly*, in the styles of halves, quarters, and slices, means a unit in which the pit cavity has been trimmed to such an extent as to leave the unit only fairly fleshy.

(n) *Slab*, in the style of slices, means an irregularly shaped unit resulting from the slicing operation that materially deviates from the normal shape of a wedge-shaped sector.

(o) *Sliver*, in the style of slices, means any unit that weighs 3 g. (0.12 oz.) or less and has the symmetry of a full slice.

(p) *Unit* means one whole, half, quarter, slice, dice, or piece of peach as applicable for the style.

§ 52.2604 Recommended sample unit sizes.

Compliance with requirements for factors of quality is based on the following sample unit sizes for the respective style.

(a) Halves; Quarters—25 units.
(b) Whole—25 units.
(c) Slices—50 units or 100 units.
(d) Diced—200 g (7 oz).
(e) Halves and pieces; Pieces or irregular pieces—1000 g (35.3 oz).

§ 52.2605 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned freestone peaches are not incorporated in the grades of the finished product since sirup or any other liquid medium is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurements for the respective designations are as follows:

Designations and Brix measurements

"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or

"Extra heavily sweetened fruit juice(s)."—22° or more but not more than 35°.

"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)."—18° or more but less than 22°.

"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juices(s)."—14° or more but less than 18°.

"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)."—10° or more but less than 14°.

"In water"—Not applicable.

"In fruit juice(s) and water"—Not applicable.

"In fruit juice(s)"—Not applicable.

"Artificially sweetened"—Not applicable.

§ 52.2606 Fill of container.

The standard of fill of container for canned freestone peaches is the maximum quantity of peach units that can be sealed in a container and processed by heat to prevent spoilage, without crushing or breaking such units. Canned freestone peaches that do not meet this requirement are "Below Standard in Fill."

§ 52.2607 Fill of container for canned "solid-pack" freestone peaches.

The fill of container for canned solid-pack freestone peaches is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. Each container of solid-pack freestone peaches shall be as full of peaches as practicable without impairment of quality and the product shall occupy not less than 90 percent of the volume of the container.

§ 52.2608 Recommended drained weights.

(a) *General.* (1) The minimum drained weight recommendations for the various styles in Table I of this subpart are not incorporated in the grades of the finished product since the drained weight is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for determining drained weight.* The drained weight of canned freestone peaches and canned "solid-pack" freestone peaches is determined by emptying the contents of the container, turning the pit cavities down in halves, upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-inch ± 3 percent, square openings) so as to distribute the product evenly, inclining the sieve to an angle of 17 to 20 degrees to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and peaches less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 x 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definitions of symbols.* (1) X_d—The average drained weight of all the sample units in the sample.

(2) LL—Lower limit for drained weights of individual sample units.

(d) *Compliance with recommended drained weights.* A lot of canned freestone peaches is considered as meeting the minimum drained weight recommendations if the following criteria are met:

TABLE I—MINIMUM DRAINED WEIGHTS FOR CANNED FREESTONE PEACHES

Container designations (metal unless otherwise stated)	Container size (overall dimensions)		Overflow capacity (fluid ounces)	Halves			
				In extra heavy sirup (ounces)		In any other liquid medium (ounces)	
	Diameter (inches)	Height (inches)		X_d	LL	X_d	LL
8Z tall	211	304		4.8	4.1	5.0	4.3
No. 300	300	407		8.6	7.8	8.8	8.0
No. 303	303	406		9.5	8.6	9.8	8.9
No. 303 glass			17.0	9.5	8.6	9.8	8.9

TABLE I—MINIMUM DRAINED WEIGHTS FOR CANNED FREESTONE PEACHES—Continued

Container designations (metal unless otherwise stated)	Container size (overall dimensions)		Overflow capacity (fluid ounces)	Halves			
	Diameter (inches)	Height (inches)		In extra heavy sirup (ounces)		In any other liquid medium (ounces)	
				X_d	LL	X_d	LL
No. 2	307	409		11.5	10.4	11.9	10.8
No. 2½ glass			28.35	16.1	14.7	16.6	15.2
No. 2½, 7 count or more	401	411		16.6	15.2	17.1	15.7
No. 2½, 6 count or less	401	411		16.2	14.8	16.7	15.3
No. 10, 24 count or more	603	700		61.0	58.5	62.5	60.0
No. 10, 23 count or less	603	700		60.0	57.5	61.5	59.0

Container size (metal, unless otherwise stated)	Quarters, halves and pieces, pieces or irregular pieces				Sliced			
	In extra heavy sirup (ounces)		In any other liquid medium (ounces)		In extra heavy sirup (ounces)		In any other liquid medium (ounces)	
	X_d	LL	X_d	LL	X_d	LL	X_d	LL
8Z tall	4.9	4.2	5.1	4.4	4.7	4.1	4.9	4.3
No. 300	8.8	8.0	9.0	8.2	8.5	7.8	8.7	8.0
No. 303 glass	9.7	8.8	10.0	9.1	9.4	8.6	9.7	8.9
No. 303	9.7	8.8	10.0	9.1	9.4	8.6	9.7	8.9
No. 2	11.7	10.6	12.1	11.0	11.3	10.4	11.7	10.8
No. 2½ glass	16.4	15.0	16.9	15.5	15.8	14.7	16.3	15.2
No. 2½	16.9	15.5	17.4	16.0	16.3	15.2	16.8	15.7
No. 10	63.0	60.5	64.5	62.0	60.0	58.0	61.0	59.0

Container size (metal, unless otherwise stated)	Heavy pack (all styles) (ounces)		Solid-pack unsweetened (all styles) (ounces)	
	X_d	LL	X_d	LL
No. 2½			24.0	22.6
No. 10	70.0	67.5	90.0	87.5

(1) The average of the drained weights from all the sample units in the sample meet the recommended average drained weight (designated as "X_d" in Table I); and

(2) The number of sample units which fail to meet the drained weight lower limit for individuals (designated as "LL" in Table I) does not exceed the applicable acceptance number specified in the single sampling plan of Table II.

TABLE II—SINGLE SAMPLING PLAN FOR DRAINED WEIGHT

Sample size (number of sample units)	3	6	13	21	29

TABLE II—SINGLE SAMPLING PLAN FOR DRAINED WEIGHT—Continued

Acceptance No.	0	1	2	3	4

[44 FR 36366, June 22, 1979; 44 FR 43252, July 24, 1979. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.2609 Recommended fill weights.

(a) *General.* The minimum fill weight recommendations specified in Table III are not incorporated in the grades of the finished product since fill weight is not a factor of quality for purpose of these grades.

(b) *Method for determining fill weight.* Fill weight is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the minimum lot average fill weight.

LWL_x means the lower warning limit for subgroup averages.

LRL_x means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R' means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the sampling allowance chart of the U.S. Standards for Inspection by Variables. This letter identifies the line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Subgroup size.* The subgroup size for determination of fill weights shall be five (5) sample units.

(e) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE III—FILL WEIGHT VALUES FOR CANNED FREESTONE PEACHES

Container size (metal unless otherwise stated)	Halves—fill weight values (ounces)							Sampling allowance code
	X'_{min}	LWL_x	LRL_x	LWL	LRL	R'	R_{max}	
8Z tall	5.6	5.1	4.9	4.6	4.1	1.2	2.5	L
No. 300	9.9	9.3	8.9	8.5	7.8	1.6	3.4	M
No. 303	11.0	10.3	10.0	9.5	8.7	1.7	3.7	N
No. 303 glass	11.0	10.3	10.0	9.5	8.7	1.7	3.7	N
No. 2	13.3	12.5	12.1	11.5	10.6	2.1	4.4	Q
No. 2½ glass	18.9	17.9	17.4	16.7	15.6	2.6	5.4	T
No. 2½, 7 count or more	19.4	18.4	17.9	17.2	16.1	2.6	5.4	T
No. 2½, 6 count or less	19.0	18.0	17.5	16.8	15.7	2.6	5.4	T
No. 10, 24 count or more	73.0	71.0	70.4	69.2	67.3	4.4	9.3	B1
No. 10, 23 count or less	72.0	70.3	69.4	68.2	66.3	4.4	9.3	B1
8Z tall	5.6	5.2	5.0	4.7	4.2	1.1	2.2	H
No. 300	10.0	9.4	9.1	8.7	8.0	1.5	3.2	L
No. 303	11.1	10.5	10.1	9.7	9.0	1.6	3.4	M
No. 303 glass	11.1	10.5	10.1	9.7	9.0	1.6	3.4	M
No. 2	13.4	12.6	12.2	11.7	10.8	2.0	4.2	P
No. 2½	19.6	18.7	18.2	17.6	16.6	2.3	4.9	S
No. 2½ glass	19.1	18.2	17.7	17.1	16.1	2.3	4.9	S
No. 10	74.0	72.5	71.7	70.6	68.9	4.0	8.4	Z
	Quarters; Halves and pieces, pieces or irregular pieces—fill weight values (ounces)							
8Z tall	5.7	5.3	5.1	4.8	4.3	1.1	2.2	H
No. 303	11.3	10.7	10.3	9.9	9.2	1.6	3.4	M
No. 2	13.6	12.8	12.4	11.9	11.0	2.0	4.2	P
No. 2½	19.9	19.0	18.5	17.9	16.9	2.3	4.9	S
No. 10	76.0	74.5	73.7	72.6	70.9	4.0	8.4	Z

[44 FR 36368, June 22, 1979; 44 FR 43252, July 24, 1979. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.2610 Grades.

(a) *"U.S. Grade A"* is the quality of canned freestone peaches that:

(1) Meets the following prerequisites in which the peaches:

(i) Have similar varietal characteristics;

(ii) Have a normal flavor and odor;

(iii) Have overall brightness of the sample unit as a mass and may be slightly affected by dullness;

(iv) Have units that are practically uniform in size and shape in sliced style;

(v) Are practically free from pit material, except for whole style;

(vi) Are practically free from crushed and broken units in the styles of whole, halves, and quarters;

(vii) Do not exceed the aggregate area of peel specified for the style as follows:

(A) Whole—5.5 cm^2 (0.85 in^2 or 1 × .85);

(B) Halves—4.5 cm^2 (0.7 in^2 or 1 × .7);

(C) Quarters—2.25 cm^2 (0.34 in^2 or 1 × .34);

(D) Slices—50 count—1.8 cm^2 (0.28 in^2 or 1 × .28); 100 count—3.5 cm^2 (0.54 in^2 or 1 × .54);

(E) Dice—0.5 cm^2 (0.08 in^2 or 1 × .08);

(F) Halves and pieces; Pieces; or Irregular pieces—3.25 cm^2 (0.5 in^2 or 1 × .5);

(viii) Have a good character such that the number of units that have fairly good character does not exceed the following:

(A) Whole; Halves; and Quarters—1 unit;

(B) Slices—50 count—3 units; 100 count—5 units;

(C) Halves and pieces; Pieces or irregular pieces—50 grams;

(D) Dice—10 grams.

(2) Is within the limits for defects as classified in Table IV and specified in Tables V, VI, VII, VIII, or IX.

(b) *"U.S. Grade B"* is the quality of canned freestone peaches that:

(1) Meets the following prerequisites in which the peaches:

(i) Have similar varietal characteristics;

(ii) Have normal flavor and odor;

(iii) Have overall brightness of the sample unit as a mass and may be slightly affected by dullness;

(iv) Have units that are practically uniform in size and shape in sliced style.

(v) Are practically free from pit material, except for whole style;

(vi) Are practically free from crushed and broken units in the styles of whole, halves, and quarters;

(vii) Do not exceed the aggregate area of peel specified for the style as follows:

(A) Whole—22.5 cm^2 (3.5 in^2 or 1 × 3.5);

(B) Halves—19 cm^2 (3 in^2 or 1 × 3);

(C) Quarters—9.5 cm^2 (1.5 in^2 or 1 × 1.5);

(D) Slices—50 count— 7 cm^2 (1.1 in^2 or 1 × 1.1); 100 count—14 cm^2 (2.2 in^2 or 1 × 2.2);

(E) Dice—1.5 cm^2 (0.23 in^2 or 1 × .23);

(F) Halves and pieces; Pieces or irregular pieces—12 cm^2 (1.9 in^2 or 1 × 1.9);

(viii) Have a reasonably good character such that the number of units that have fairly good character does not exceed the following:

(A) Whole; halves; and quarters—3 units;

(B) Slices—50 count—5 units; 100 count—10 units;

(C) Halves and pieces; Pieces or irregular pieces—100 grams;

(D) Dice—20 grams.

(2) Is within the limits for defects as classified in Table IV and specified in Tables V, VI, VII, VIII, or IX.

(c) *"U.S. Grade C"* is the quality of canned freestone peaches that:

(1) Meets the following prerequisites in which the peaches:

(i) Have similar varietal characteristics;

(ii) Have normal flavor and odor;

(iii) Have overall brightness of the sample unit as a mass that is materially affected by dullness;

(iv) Have units that may be variable in size and shape in sliced style;

(v) Are practically free from pit material, except for whole style;

(vi) Are practically free from crushed and broken units in the styles of whole, halves, and quarters;

(vii) Do not exceed the aggregate area of peel specified for the style as follows:

(A) Whole—45 cm^2 (7 in^2 or 1 × 7);

(B) Halves—38 cm^2 (5.9 in^2 or 1 × 5.9);

(C) Quarters—19 cm^2 (3 in^2 or 1 × 3);

(D) Slices—50 count—15 cm^2 (2.3 in^2 or 1 × 2.3); 100 count 30 cm^2 (4.6 in^2 or 1 × 4.6);

(E) Dice—3 cm^2 (0.5 in^2 or 1 × .5);

(F) Halves and pieces; Pieces or irregular pieces—27 cm^2 (4.2 in^2 or 1 × 4.2);

(viii) Have a fairly good character such that the number of units that have poor character does not exceed the following:

(A) Whole; Halves, and Quarters—3 units;

(B) Slices—50 count—5 units; 100 count—10 units;

(C) Halves and pieces; Pieces or irregular pieces—100 grams;

(D) Dice—20 grams.

(2) Is within the limits for defects as classified in Table IV and specified in Tables V, VI, VII, VIII, or IX.

(d) *"Substandard"* is the quality of canned freestone peaches that fails to meet the requirements for U.S. Grade C.

[44 FR 36364, June 22, 1979, as amended at 45 FR 4345, Jan. 22, 1980. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.2611 Factors of quality.

The grade of canned freestone peaches is based on compliance with the requirements for the following quality factors:

(a) *Prerequisite quality factors:*

(1) Similar varietal characteristics;

(2) Flavor and odor;

(3) Brightness;

(4) Uniformity of size of slices;

(5) Pit material;

(6) Crushed and broken units;

(7) Peel;

(8) Character.

(b) *Classified quality factors:*

(1) Individual unit color;

(2) Workmanship;

(3) Blemishes;

(4) Uniformity of size of whole, halves, and quarters;

(5) Mechanical damage;

(6) Extraneous vegetable material.

§ 52.2612 Classification of defects.

Defects are classified as minor, major, severe, or critical. Each "X" mark in Table IV represents "one (1) defect."

TABLE IV—CLASSIFICATION OF DEFECTS

Quality factor	Defect	Classification			
		Minor	Major	Severe	Critical
	WHOLE				
Individual unit color	Fairly good (in grade A and B only)		X		
	Poor (in grade A, B, and C)			X	
Blemished	Slightly	X			
	Materially		X		
	Seriously			X	
Uniformity of size	Excessive variation (each unit)	X			
Mechanical damage	Gouged:				
	Slightly	X			
	Materially		X		
	Seriously			X	
	Other mechanical damage:				
	Slightly	X			
	Materially		X		
	Seriously			X	
Extraneous vegetable material.	Small piece (each piece)				X
	HALVES AND QUARTERS				
Individual unit color	Fairly good (in grade A and B only)		X		
	Poor (in grade A, B, and C)			X	
Blemished	Slightly	X			
	Materially		X		
	Seriously			X	
Uniformity of size	Excessive variation (each unit)	X			
Mechanical damage	Off-suture:				
	Slightly	X			
	Materially		X		

TABLE IV—CLASSIFICATION OF DEFECTS—Continued

Quality factor	Defect	Classification			
		Minor	Major	Severe	Critical
	Seriously			X	
	Partially detached piece	X			
	Detached piece		X		
	Shelly unit (in grade A and B only)		X		
	Gouged:				
	Slightly	X			
	Materially		X		
	Seriously			X	
	Other mechanical damage:				
	Slightly	X			
	Materially		X		
	Seriously			X	
Extraneous vegetable material.	Short stem (each stem)				X.
	Small piece (each piece)				X.
	SLICED				
Individual unit color	Fairly good (in grade A and B only)		X		
	Poor (in grade A, B, and C)			X	
Workmanship	Sliver	X			
	Slab		X		
Blemished	Slightly	X			
	Materially		X		
	Seriously			X	
Mechanical damage	Shelly unit (in grade A and B only)		X		
	Gouged:				
	Slightly	X			
	Materially		X		
	Seriously			X	
	Partial slice	X			
Extraneous vegetable material.	Short stem (each stem)			X	
	Small piece (each piece)				X.
	DICED				
Individual unit color	Fairly good (in grade A and B only—each 8 g)		X		
	Poor (in grade A, B, and C—each 8 g)			X	
Workmanship	Units more than 20 mm (.79 in) on one edge plus the units that pass through a ⁵⁄₁₆ in (8mm) sieve[1] (each 8 g).	X			
Blemished	Materially (each 8 g)		X		
	Seriously (each 8 g)			X	
Extraneous vegetable material.	Short stem and small piece (each piece)				X.
	HALVES AND PIECES; PIECES OR IRREGULAR PIECES				
Individual unit color	Fairly good (in grade A and B only—each 40 g)		X		
	Poor (in grade A, B, and C—each 40 g)			X	
Blemished	Slightly (each 40 g)	X			
	Materially (each 40 g)		X		
	Seriously (each 40 g)			X	
Extraneous vegetable material.	Short stem and small piece (each piece)				X.

[1] Sieve to be used is a five-sixteenths inch sieve as listed in table I of "Standard Specifications for Sieves," published March 1, 1940, in L.C. 584 of the National Bureau of Standards, U.S. Department of Commerce.

§ 52.2613 Tolerances for defects.

TABLE V—WHOLE

	Grade A				Grade B				Grade C			
	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit
AQL [1]	10.0	2.5	1.0	0.4	15.0	10.0	2.5	1.0	25.0	15.0	10.0	2.5

TABLE VI—HALVES; QUARTERS

	Grade A				Grade B				Grade C			
	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit
AQL [1]	15.0	8.5	2.5	0.4	25.0	15.0	5.0	1.0	40.0	25.0	15.0	2.5

TABLE VII—SLICES

	Grade A				Grade B				Grade C			
	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit
AQL [1]	12.5	5.0	1.5	0.65	25.0	12.5	5.0	1.5	40.0	20.0	12.5	2.5

TABLE VIII—DICES

	Grade A				Grade B				Grade C			
	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit
AQL [1]	12.5	6.5	2.5	0.4	15.0	8.5	4.0	0.65	20.0	10.0	8.5	1.0

TABLE IX—HALVES AND PIECES: PIECES OR IRREGULAR PIECES

	Grade A				Grade B				Grade C			
	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit	Total [2]	Maj	Sev	Crit
AQL [1]	10.0	2.5	1.0	0.4	15.0	6.5	2.5	1.0	25.0	15.0	6.5	2.5

[1] AQL expressed as defects per hundred units.

[2] Total = Minor + Major + Severe + Critical.

§ 52.2614 Sample size.

The sample size to determine compliance with requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulation Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83) for lot inspection and on-line inspection, as applicable.

§ 52.2615 Compliance with quality requirements.

(a) *Lot inspection.* A lot of canned freestone peaches is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.2610 are met;

(2) The Acceptable Quality Levels (AQL) in Tables V, VI, VII, VIII, and IX, as applicable for the style, are not exceeded.

(b) *On-line inpsection.* A portion of production is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.2610 are met;

(2) The Acceptable Quality Levels (AQL) in Tables V, VI, VII, VIII, and IX, as applicable for the style, are not exceeded.

(c) *Single sample unit.* Each unofficial sample unit submitted for quality evaluation will be treated individually and is considered as meeting the requirements for quality if:

(1) The prerequisite requirements specified in § 52.2610 are met;

(2) The Acceptable Quality Levels (AQL) in Tables V, VI, VII, VIII, and IX, as applicable for the style, are not exceeded.

TABLE I—MINIMUM DRAINED WEIGHTS FOR CANNED FREESTONE PEACHES

Container designations (metal, unless otherwise stated)	Container size (overall dimensions)		Overflow capacity (fluid ounces)	Halves			
				In extra heavy sirup		In any other liquid medium (ounces)	
	Diameter (inches)	Height (inches)		X_a	LL	X_a	LL
8Z tall	211	304		4.8	4.1	5.3	4.3
No. 300	300	407		8.6	7.8	8.8	8.0
No. 303	303	406		9.5	8.6	9.8	8.9
No. 303 glass			17.0	9.5	8.6	9.8	8.9
No. 2	307	409		11.5	10.4	11.9	10.8
No. 2½ glass			28.35	16.1	14.7	16.6	15.2
No. 2½, 7 count or more	401	411		16.6	15.2	17.1	15.7
No. 2½, 6 count or less	401	411		16.2	14.8	16.7	15.3
No. 10, 24 count or more	603	700		61.0	58.5	62.5	60.0
No. 10, 23 count or less	603	700		60.0	57.5	61.5	59.0

Container size (metal, unless otherwise stated)	Quarters, halves and pieces, or irregular pieces				Sliced			
	In extra Heavy sirup (ounces)		In any other liquid medium (ounces)		In extra heavy sirup (ounces)		In any other liquid medium (ounces)	
	X_d	LL	X_d	LL	X_d	LL	X_d	LL
8Z tall	4.9	4.2	5.1	4.4	4.7	4.1	4.9	4.3
No. 300	8.8	8.0	9.0	8.2	8.5	7.8	8.7	8.0
No. 303 glass	9.7	8.8	10.0	9.1	9.4	8.6	9.7	8.9
No. 303	9.7	8.8	10.0	9.1	9.4	8.6	9.7	8.9
No. 2	11.7	10.6	12.1	11.0	11.3	11.4	11.7	10.8
No. 2½ glass	16.4	15.0	16.9	15.5	15.8	14.7	16.3	15.2
No. 2½	16.9	15.5	17.4	16.0	16.3	15.2	16.8	15.7
No. 10	63.0	60.5	64.5	62.0	60.0	58.0	61.0	59.0

TABLE III—FILL WEIGHT VALUES FOR CANNED FREESTONE PEACHES

Container size (metal, unless otherwise stated)	Halves							Sampling allowance code
	Fill weight values (ounces)							
	$\bar{X}_{min}$	$LWL\bar{x}$	$LRL\bar{x}$	LWL	LRL	$\bar{R}$	R_{max}	
8Z tall	5.6	5.1	4.9	4.6	4.1	1.2	2.5	L
No. 300	9.9	9.3	8.9	8.5	7.8	1.6	3.4	M
No. 303	11.0	10.3	10.0	9.5	8.7	1.7	3.7	N
No. 303 glass	11.0	10.3	10.0	9.5	8.7	1.7	3.7	N
No. 2	13.3	12.5	12.1	11.5	10.6	2.1	4.4	O
No. 2½ glass	18.9	17.9	17.4	16.7	15.6	2.6	5.4	T
No. 2½, 7 count or more	19.4	18.4	17.9	17.2	16.1	2.6	5.4	T
No. 2½, 6 count or less	19.0	18.0	17.5	16.8	15.7	2.6	5.4	T
No. 10, 24 count or more	73.0	71.0	70.4	69.2	67.3	4.4	9.3	B1
No. 10, 23 count or less	72.0	70.3	69.4	68.2	66.3	4.4	9.3	B1

Container size (metal, unless otherwise stated)	Sliced							Sampling allowance code
	Fill weight values (ounces)							
	$\bar{X}_{min}$	LWLx	LRLx	LWL	LRL	$\bar{R}$	R_{max}	
8Z tall	5.6	5.2	5.0	4.7	4.2	1.1	2.2	H
No. 300	10.0	9.4	9.1	8.7	8.0	1.5	3.2	L
No. 303	11.1	10.5	10.1	9.7	9.0	1.6	3.4	M
No. 303 glass	11.1	10.5	10.1	9.7	9.0	1.6	3.4	M
No. 2	13.4	12.6	12.2	11.7	10.8	2.0	4.2	P
No. 2½	19.6	18.7	18.2	17.6	16.6	2.3	4.9	S
No. 2½ glass	19.1	18.2	17.7	17.1	16.1	2.3	4.9	S
No. 10	74.0	72.5	71.7	70.6	68.9	4.0	8.4	Z
	Quarters—Halves and pieces; Pieces or irregular pieces—Fill weight values							
8Z tall	5.7	5.3	5.1	4.8	4.3	1.1	2.2	H
No. 303	11.3	10.7	10.3	9.9	9.2	1.6	3.4	M
No. 2	13.6	12.8	12.4	11.9	11.0	2.0	4.2	P
No. 2½	19.9	19.0	18.5	17.9	16.9	2.3	4.9	S
No. 10	76.0	74.5	73.7	72.6	70.9	4.0	8.4	Z

LOT INSPECTION AND CERTIFICATION

§ 52.2616 Ascertaining the grade of a lot.

The grade of a lot of canned freestone peaches covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (7 CFR 52.1 to 52.87).

[38 FR 13349, May 21, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2617 Score sheet.

Size and kind of container
Container mark or identification
Label
Net weight (ounces)
Vacuum (inches)
Drained weight (ounces)
Solid-pack ( ) Spiced ( )
If in a liquid packing medium
  Brix measurement
  Sirup designation (extra heavy, heavy, etc.)
Style (halves), (quarters), (whole), etc
Count (halves, quarters, whole)

Factors		Score points	
Color	20	(A)	[2] 18-20
		(B)	[2] 16-17
		(C), (D), (C-SP)	[1] 14-15
		(SStd) and (SStd-SP)	[1] 0-13
Uniformity of size and symmetry	20	(A)	18-20
		(B)	16-17
		(C)	[2] 14-15
		(D) and (SStd)	[1] 0-13
Absence of defects	30	(A)	[2] 27-30
		(B)	[1] 24-26
		(C) and (C-SP)	[1] 21-23
		(D), (SStd) and (SStd-SP)	[1] 0-20
Character	30	(A)	[2] 27-30
		(B)	[2] 24-26
		(C) and (C-SP)	[1] 21-23
		(D), (SStd) and (SStd-SP)	[1] 0-20
Total score	100		

Varietal characteristics ( ) similar ( ) dissimilar
Normal flavor and odor
Grade

[1] Limiting rule

[2] Partial limiting rule

[38 FR 13349, May 21, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Canned and Canned Solid-Pack Apricots

SOURCE: 39 FR 8904, Mar. 7, 1974, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2641 Product description.

(a) *Canned apricots.* "Canned apricots," is the product represented as defined in the Standards of Identity for canned apricots (21 CFR 145.116 and 145.115(a)) issued pursuant to the Federal Food, Drug, and Cosmetic Act, and prepared in one of the styles specified in § 52.2642; in one of the liquid media specified in § 52.2644; and is sealed in a container and before or after sealing is so processed by heat as to prevent spoilage. The food may be seasoned with one or more of the optional ingredients permitted in the Food and Drug Standards of Identity.

(b) "Canned solid-pack apricots," is the product represented as defined in the standards of identity for canned apricots (21 CFR 145.116) issued pursuant to the Federal Food, Drug, and Cosmetic Act and prepared in one of the styles specified in § 52.2542 and is sealed in a container and before or after sealing is so processed by heat as to prevent spoilage. The food may be seasoned with one or more of the optional ingredients permitted in the aforementioned standards of identity.

[41 FR 15018, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2642 Styles.

(a) "Halves" are pitted apricots cut approximately in half along the suture from stem to apex.

(b) "Slices" are pitted apricots cut into thin sectors or strips.

(c) "Whole" is unpitted apricots with stems removed.

(d) "Pieces or irregular pieces" are cut apricot units that are predominantly irregular in size and shape which do not conform to a single style or which are a mixture of two or more of such styles.

(e) When the apricots are unpeeled the name of the style is preceded or followed by the word "unpeeled."

(f) When the apricots are peeled, the name of the style is preceded or followed by the word "peeled."

[39 FR 8904, Mar. 7, 1974, as amended at 41 FR 15018, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2643 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of halves, slices, and whole canned apricots, that:

(1) Have similar varietal characteristics;

(2) Have normal flavor and odor;

(3) Have at least a reasonably good color that scores not less than 17 points;

(4) Are at least reasonably uniform in size and symmetry for the applicable styles except for limits of off-suture cuts in the style of halves;

(5) Are practically free from defects;

(6) Have at least a reasonably good character; and

(7) For those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned apricots of any style that:

(1) Have similar varietal characteristics;

(2) Have a normal flavor and odor;

(3) Have at least a reasonably good color;

(4) Are at least fairly uniform in size and symmetry for the applicable styles except for the limits of off-suture cuts in the style of halves;

(5) Are at least reasonably free from defects;

(6) Have at least a reasonably good character; and

(7) For those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned apricots of any style that:

(1) Have similar varietal characteristics;

(2) Have a normal flavor and odor;

(3) Have at least a fairly good color;

(4) Are at least fairly uniform in size and symmetry for the applicable style;

(5) Are at least fairly free from defects;

(6) Have at least a fairly good character; and

(7) For those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(d) "Substandard" is the quality of canned apricots that fail to meet the requirements of U.S. Grade C.

Liquid Media, Fill of Container, Drained Weights and Fill Weights

§ 52.2644 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned apricots are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The designations of liquid packing media and the Brix measurements, where applicable, are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s)."	25° or more but not more than 40°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)."	21° or more but less than 25°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)."	16° or more but less than 21°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)."	10° or more but less than 16°.
"In water"	Not applicable.
"In fruit juice(s) and water	Do.
"In fruit juice(s)"	Do.
"Artificially sweetened"	Do.

[39 FR 8904, Mar. 7, 1974, as amended at 41 FR 15018, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2645 Fill of container.

The standard of fill of container for canned apricots is the maximum quantity of the apricot units which can be sealed in the container and processed by heat to prevent spoilage, without crushing or breaking such ingredient. Canned apricots that do not meet this requirement are "Below Standard in Fill."

§ 52.2646 Recommended minimum drained weights.

(a) *General.* (1) The minimum drained weight recommendations for the various styles in Table II are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Definitions of symbols.* (1) X_4—the minimum average drained weight of all the sample units in the sample.

(2) LL—Lower limit for the drained weight of an individual sample unit.

(c) *Method for ascertaining drained weight.* (1) The drained weight is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937)±3 percent, square openings) so as to distribute the product evenly, inclining the sieve to approximately a 17 to 20 degree angle to facilitate drainage, and allowing the product to drain for two minutes.

(2) The drained weight is the weight of the sieve and apricots less the weight of the dry sieve. A sieve 8 inches in diameter is used for No. 3 size cans (404x414) and smaller sizes, and a sieve 12 inches in diameter is used for containers larger than the No. 3 size can.

(d) *Compliance with recommended minimum drained weights.* A lot of canned apricots is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended average drained weight (designated as X_4) in Table II; and

(2) The number of sample units which fail to meet the recommended minimum drained weight for individuals (designated as LL) in Table II does not exceed the applicable acceptance number specified in Table I.

TABLE I—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29	39	48	60
Acceptance number	0	1	2	3	4	5	6	7

TABLE II—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED APRICOTS

Container size (metal, unless otherwise stated)		In extra heavy and heavy sirups (ounces)					
Designation	Dimensions	Unpeeled or peeled halves; slices; mixed pieces of irregular sizes and shapes		Whole unpeeled		Whole peeled	
		LL (ounces)	X_d (ounces)	LL (ounces)	X_d (ounces)	LL (ounces)	X_d (ounces)
5Z	211 x 200	2.1	2.7				
5Z	211 x 202	2.4	3.0				
7Z	211 x 212	3.4	4.0				
8Z tall	211 x 304	4.2	4.8	3.7	4.3	3.8	4.5
No. 300	300 x 407	7.9	8.6	6.8	7.6	7.2	8.0
No. 303 glass		8.7	9.5	7.6	8.5	8.0	8.9
No. 303	303 x 406	8.7	9.5	7.6	8.5	8.0	8.9
No. 2	307 x 409	10.6	11.5	9.6	10.5	9.8	10.8
No. 2½ glass		15.2	16.3	13.6	14.9	13.9	15.2
No. 2½	401 x 411	15.5	16.7	13.8	15.1	14.4	15.7
No. 10	603 x 700	59.7	62.0	57.5	60.0	57.9	60.4
		In any other liquid medium					
5Z	211 x 200	2.2	2.8				
5Z	211 x 202	2.5	3.1				
7Z	211 x 212	3.5	4.1				
8Z tall	211 x 304	4.3	4.9	3.8	4.4	3.9	4.6
No. 300	300 x 407	8.1	8.8	7.0	7.8	7.4	8.2
No. 303 glass		8.9	9.7	7.8	8.7	8.2	9.1
No. 303	303 x 406	8.9	9.7	7.8	8.7	8.2	9.1
No. 2	307 x 409	10.9	11.8	9.7	10.7	10.1	11.1
No. 2½ glass		15.7	16.8	14.0	15.3	14.3	15.6
No. 2½	401 x 411	16.0	17.2	14.2	15.5	14.8	16.1
No. 10	603 x 700	61.7	64.0	59.0	61.5	59.5	62.0

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED APRICOTS

Container size (metal) unless otherwise stated)		Whole peeled—Fill weight values							Sampling allowance code
Designation	Dimensions	X'_{min} (ounces)	LWL_x (ounces)	LRL_x (ounces)	LWL (ounces)	LRL (ounces)	R' (ounces)	R_{max} (ounces)	
5Z	211 x 200	3.0	2.6	2.4	2.2	1.8	0.9	2.0	G.
5Z	211 x 202	3.3	2.9	2.7	2.5	2.1	0.9	2.0	G.
7Z	211 x 212	4.4	3.9	3.7	3.4	2.9	1.2	2.5	I.
8Z tall	211 x 304	5.3	4.8	4.6	4.3	3.8	1.2	2.5	I.
No. 300	300 x 407	9.4	8.9	8.6	8.3	7.7	1.3	2.7	J.
No. 303 glass		10.4	9.9	9.6	9.2	8.6	1.4	3.0	K.
No. 303	303 x 406	10.4	9.9	9.6	9.2	8.6	1.4	3.0	K.
No. 2	307 x 409	12.6	12.0	11.6	11.2	10.5	1.6	3.4	M.
No. 2½ glass		18.0	17.2	16.8	16.2	15.3	2.1	4.4	Q.
No. 2½	401 x 411	18.4	17.6	17.2	16.6	15.7	2.1	4.4	Q.
No. 10	603 x 700	69.5	68.2	67.5	66.5	65.0	3.5	7.4	X.
		Whole unpeeled—Fill weight values							
8 Z tall		4.6	4.1	3.8	3.5	2.9	1.3	2.7	J.
No. 300		8.3	7.7	7.4	7.0	6.3	1.5	3.2	L.
No. 303 glass		9.2	8.6	8.2	7.8	7.1	1.6	3.4	M.
No. 303		9.2	8.6	8.2	7.8	7.1	1.6	3.4	M.
No. 2		11.4	10.7	10.3	9.8	9.0	1.9	3.9	O.
No. 2½ glass		16.2	15.3	14.8	14.2	13.2	2.3	4.9	S.
No. 2½		16.5	15.6	15.1	14.5	13.5	2.3	4.9	S.
No. 10		65.0	63.5	62.7	61.6	59.9	4.0	8.4	Z
		Whole peeled—Fill weight values							
8 Z tall		5.0	4.5	4.2	3.9	3.3	1.3	2.7	J.
No. 300		8.9	8.3	8.0	7.6	6.9	1.5	3.2	L.
No. 303 glass		9.9	9.3	8.9	8.5	7.8	1.6	3.4	M.
No. 303		9.9	9.3	8.9	8.5	7.8	1.6	3.4	M.
No. 2		12.0	11.3	10.9	10.4	9.6	1.9	3.9	O.

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED APRICOTS—Continued

Container size (metal unless otherwise stated)		Whole peeled—Fill weight values							Sampling allowance code
Designation	Dimensions	X'_{min} (ounces)	LWL_x (ounces)	LRL_x (ounces)	LWL (ounces)	LRL (ounces)	R′ (ounces)	R_{max} (ounces)	
No. 2½ glass		17.0	16.1	15.6	15.0	14.0	2.3	4.9	S
No. 2½		17.5	16.6	16.1	15.5	14.5	2.3	4.9	S
No. 10		66.5	65.0	64.2	63.1	61.4	4.0	8.4	Z
		Peeled or unpeeled sliced—Fill weight values							
5 Z	211 x 200	3.2	2.9	2.7	2.5	2.1	0.8	1.7	F
5 Z	211 x 202	3.5	3.2	3.0	2.8	2.4	0.8	1.7	F
7 Z	211 x 212	4.7	4.3	4.1	3.8	3.3	1.1	2.2	H
8 Z tall	211 x 304	5.6	5.2	5.0	4.7	4.2	1.1	2.2	H
No. 300	300 x 407	9.9	9.4	9.2	8.9	8.4	1.2	2.5	I
No. 303 glass		11.0	10.6	10.2	9.9	9.3	1.3	2.7	J
No. 303	303 x 406	11.0	10.6	10.2	9.9	9.3	1.3	2.7	J
No. 2	307 x 409	13.3	12.8	12.5	12.1	11.5	1.4	3.0	K
No. 2½ glass		19.0	18.3	18.0	17.5	16.7	1.7	3.7	N
No. 2½	401 x 411	19.4	18.7	18.4	17.9	17.1	1.7	3.7	N
No. 10	603 x 700	72.5	71.3	70.7	69.9	68.6	3.0	6.4	V
		Mixed pieces of irregular sizes and shapes—Fill weight values							
No. 2½		18.7	17.9	17.5	16.9	16.0	2.1	4.4	Q
No. 10		70.5	69.2	68.5	67.5	66.0	3.5	7.4	X

[39 FR 8904, Mar. 7, 1974; 39 FR 15996, May 7, 1974. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2647 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations for the various styles in Table III are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weight.* The fill weight of canned apricots is determined in accordance with the U.S. Department of Agriculture's U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup means a group of sample units representing a portion of a sample.

(1) X'_{min} means the minimum lot average fill weight.

(2) LWLx means the lower warning limit for subgroup averages.

(3) LRLx means the lower reject limit for subgroup averages.

(4) LWL means the lower warning limit for individual fill weight measurements.

(5) LRL means the lower reject limit for individual fill weight measurements.

(6) R′ means a specified average range value.

(7) R_{max} means a specified maximum range for a subgroup.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights for canned apricots shall be in accordance with the acceptance criteria specified in the U.S. Department of Agriculture's U.S. Standards for Inspection by Variables and U.S. Standards for Determination of Fill Weights.

SAMPLE UNIT SIZE

§ 52.2648 Sample unit size.

Compliance with requirements for the various quality factors is based on the following sample unit sizes:

(a) Halves—50 halves.

(b) Whole—25 whole apricots. In the case of the factor of color and the factor of defects, only with respect to minor defects, a whole apricot shall be considered halved along the suture and each half therefrom is a unit and the sample unit size thereby becomes 50 halves.

(c) Slices—50 slices.

(d) Mixed pieces of irregular sizes and shapes—30 ounces drained fruit of finished product or 33 ounces raw fruit for on-line control.

FACTORS OF QUALITY

§ 52.2649 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the Standards, the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Halves, whole (points)	Slices (points)	Mixed pieces of irregular sizes and shapes (points)
(i) Color	20	20	20
(ii) Uniformity of size and symmetry	20	....	....
(iii) Defects	30	30	40
(iv) Character	30	30	40
Total score	100	([1])	100

[1] (80 × 100)/80 = 100.

(b) *Definition of flavor and odor.* "Normal flavor and odor" means that the canned apricots are free from objectionable flavors and objectionable odors of any kind.

§ 52.2650 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.2651 Color.

(a) *General.* (1) The color of canned apricots refers to the characteristic color of the outer, uncut surfaces of the units; and the varying degrees of pale yellow areas, light greenish-yellow areas, and light green areas.

(2) In evaluating the factor of color for canned spiced apricots consideration is given to any effect the added spices may contribute to the color.

(b) *Definitions*—(1) *Well colored.* Well colored means that the units have a bright typical color characteristic of well-matured apricots. The units may have pale yellow areas not exceeding one-fourth of the outer surface area and are free from brown color due to oxidation, improper processing, or other causes.

(2) *Reasonably well colored.* Reasonably well colored means that the units have a color typical of reasonably well matured apricots. The units may have pale yellow areas not exceeding one-half of the outer surface area or may have light greenish-yellow areas not exceeding one-fourth of the outer surface area and are free from brown color due to oxidation, improper processing, or other causes.

(3) *Fairly well colored.* Fairly well colored means that the units have a typical color characteristic of fairly well matured apricots. The units may have pale yellow areas, may have light greenish-yellow areas not exceeding one-half of the outer surface area, or have light green areas not exceeding one-fourth of the outer surface areas. The units may have a slight brown color due to oxidation, improper processing, or other causes.

(4) *Poorly colored.* Poorly colored means that the units have light greenish-yellow areas exceeding one-half of the outer surface area, or light green areas exceeding one-fourth of the outer surface area, and/or may have more than a slight brown color due to oxidation, improper processing, or other causes.

(c) (*A*) *classification.* Halves, slices, and whole canned apricots that possess a good color may be given a score of 18 to 20 points. "Good color" means that the apricots are well colored; the sample unit as a mass is practically uniform in color, and the number of units that may be reasonably well colored does not exceed the number specified for the style in § 52.2655.

(d) (*B*) *classification.* Halves, slices, and whole canned apricots that possess a reasonably good color may be given a score of 16 or 17 points. Canned apricots of these styles that score 16 points shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). Canned apricots of mixed pieces or irregular sizes and shapes that have at least a reasonably good color may be given a score of 16 to 20 points. "Reasonably good color" means that the apricots are at least reasonably well colored; the sample unit as a mass is reasonably uniform in color; and the number of units that may be fairly well colored does not exceed the number specified for the style in § 52.2655.

(e) (*C*) *classification.* Canned apricots of any style that possess a fairly good color may be given a score of 14 or 15 points. Canned apricots that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the apricots are fairly well colored; the sample unit as a mass is fairly uniform in color, and the number of poorly colored units does not exceed the number specified for the style in § 52.2655.

(f) (*SStd*) *classification.* Canned apricots that fail to meet the color requirements for Grade C may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2652 Uniformity of size and symmetry.

(a) *General.* The factor of uniformity of size and symmetry for the styles of slices and mixed pieces of irregular sizes and shapes is not based on any detailed requirement and is not scored; the other three factors (color, defects, and character as applicable) are scored and for the style of slices the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score. Uniformity of size and symmetry for the styles of halves and whole pertains to the percent by which the weight of the largest full-sized unit exceeds the weight of the smallest full-sized unit. In the style of halves this factor pertains to the number of off-suture cuts and detached or partially detached pieces. A unit that possesses an off-suture cut and is scoreable as such and in addition possesses a partially detached piece is scored as a partially detached piece, not both.

(b) *Definitions*—(1) *Off-suture cut.* "Off-suture cut" in the style of halves means a halved unit which has been cut at a distance from the suture greater than one-fourth inch at the widest measurement from the suture.

(2) *Detached piece.* "Detached piece" is a piece in the style of halves which has the appearance of a slice resulting from an off-suture cut or improper cutting that is completely separated from the half from which cut.

(3) *Partially detached piece.* "Partially detached piece" in the style of halves, is a piece which has the appearance of a slice resulting from an off-suture cut or improper cutting and is detached more than one-third the length of the half along the suture or approximately parallel with the suture. A partially detached piece, together with the unit to which it is attached, is considered as one unit.

(c) (*A*) *classification.* The styles of halves and whole canned apricots that are practically uniform in size and symmetry may be given a score of 18 to 20 points. "Practically uniform in size and symmetry" means that the number of units that exceed the maximum weight variation, the number of detached or partially detached pieces in the style of halves, and/or the number of units of halves that possess off-suture cuts do not exceed the applicable number specified in § 52.2655.

(d) (*B*) *classification.* The styles of halves and whole canned apricots that are reasonably uniform in size and symmetry may be given a score of 16 or 17 points. A sample unit of the style of halves that possess more than 5 units which have off-suture cuts shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably uniform in size and symmetry" means that the number of units that exceed the maximum weight variation, the number of detached or partially detached pieces, and/or the number of units of halves that possess off-suture cuts do not exceed the applicable number specified in § 52.2655.

(e) (*C*) *classification.* The styles of halves and whole canned apricots that are fairly uniform in size and symmetry may be given a score of 14 or 15 points. Canned apricots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product. A sample unit of halves style that possesses more than 8 units that have off-suture cuts shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a partial limiting rule). "Fairly uniform in size and symmetry" means that the units may vary in size, thickness, and symmetry; and that the number of units that exceed the maximum weight variation, the number of detached or partially detached pieces, and/or the number of units of halves styles that possess off-suture cuts do not exceed the applicable number specified in § 52.2655.

(f) (*SStd*) *classification.* Canned apricots that fail to meet the uniformity of size and symmetry requirements for Grade C may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2653 Defects.

(a) *General.* (1) The factor of defects refers to the degree of freedom from pit material, loose pits, harmless extraneous material, short stems, peel, minor blemishes, major blemishes, and crushed or broken units.

(2) Canned whole apricots shall be considered as halved along the suture and each half therefrom is considered a separate unit in evaluating the factor of defects with respect to minor blemishes only. Each whole apricot shall be considered as a separate unit in ascertaining compliance with allowances for major blemishes.

(b) *Definitions*—(1) *Harmless extraneous material.* "Harmless extraneous material" means any harmless vegetable substance (such as, but not limited to, a leaf or portion thereof, or a large stem) that is harmless.

(2) *Short stem.* A "short stem" means the short, thick, woody, stem which attaches the apricot to the twig of the tree or other stem material of equivalent woodiness and shortness.

(3) *Pit material.* "Pit material" means any whole pit in all styles other than whole styles or any portion of an apricot pit, regardless of size, except when whole apricot pits or apricot kernels are declared as seasoning ingredients in other than whole styles.

(4) *Loose pit.* A "loose pit" means a whole, unbroken pit not adhering to the flesh of a unit in the styles of whole apricots.

(5) *Minor blemish.* "Minor blemish" in unpeeled styles includes "freckles" and also means:

(i) Light brown to brown surface areas which, singly or in combination on a unit, exceed in the aggregate the area of a circle ⅛ inch (3mm) in diameter but do not exceed in the aggregate the area of a circle ¼ inch (6mm) in diameter; or

(ii) Single dark brown surface areas that do not exceed the area of a circle ⅛ inch (3mm) in diameter but which, singly or in combination with other "minor blemishes" on a unit, affect materially but not seriously the appearance of the unit. Light brown to brown surface areas and "freckles" that are insignificant and less than the area of a circle ⅛ inch (3mm) in diameter and which do not affect materially the appearance of the unit are not considered "defects."

(6) *Major blemish.* "Major blemish" in canned apricots includes units affected by scab, hail injury, discoloration, or other abnormalities in the following degree:

(i) Light brown to brown surface areas in unpeeled styles which, singly or in combination on a unit, exceed in the aggregate the area of a circle ¼ inch (6mm) in diameter;

(ii) Blemishes that extend into the fruit tissue regardless of area or depth;

(iii) Single dark brown surface areas in unpeeled styles that exceed the area of a circle ⅛ inch (3mm) in diameter, whether or not the unit is affected by minor blemishes; or

(iv) Any blemish whether or not specifically defined or mentioned in this subparagraph which affects seriously the appearance of the unit but is not a filthy or decomposed substance.

(7) *Crushed or broken.* "Crushed or broken" means that:

(i) A unit in halves or whole style of canned apricots is "crushed" if the unit has definitely lost its normal shape and is crushed not due to ripeness; and

(ii) A unit in halves or whole style of canned apricots is "broken" if severed into definite parts; halves of canned apricots that are slightly or partially split or mashed from the edge to the pit cavity are not considered broken, or units in the style of peeled whole apricots that are mashed or very soft due to ripeness to the extent that the pit cavity is exposed or a seed missing therefrom, are not crushed or broken. Portions equivalent to a full-size unit that has been broken are considered as one unit in determining compliance with the allowances for this defect.

(c) (*A*) *classification.* Halves, slices, and whole canned apricots that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that:

(1) The amount of peel that may be present in peeled styles does not exceed the amount specified in § 52.2655; and

(2) The number of other defects that may be present does not exceed the number specified for the applicable style in § 52.2655.

(d) (*B*) *classification.* Halves, slices, and whole canned apricots that are reasonably free from defects may be given a score of 24 to 26 points. Canned apricots of mixed pieces of irregular sizes and shapes that are at least reasonably free from defects may be given a score of 32 to 40 points. Canned apricots of any style that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) The amount of peel that may be present in peeled styles does not exceed the amount specified in § 52.2655;

(2) With respect to all styles, the number of other defects that may be present does not exceed the number specified for the applicable style in § 52.2655.

(e) (*C*) *classification.* Halves, slices, and whole canned apricots that are fairly free from defects may be given a score of 21 to 23 points. Canned apricots of mixed pieces and irregular sizes and shapes that are fairly free from defects may be given a score of 28 to 31 points. Canned apricots of any style that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that:

(1) The amount of peel that may be present in peeled styles does not exceed the amount specified in § 52.2655; or

(2) With respect to all styles, the number of other defects that may be present does not exceed the number specified for the applicable style in § 52.2655.

(f) (*SStd*) *classification.* Canned apricots that fail to meet the defect requirements for Grade C may be given a score of 0 to 20 points for the styles of halves, slices, and whole and 0 to 27 points for mixed pieces of irregular sizes and shapes, and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2654 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture, and condition of the flesh, the firmness and tenderness of the canned apricots and their tendency to retain their apparent original conformation and size without disintegration.

(b) *Definitions*—(1) *Good character.* "Good character" means that the units have a practically uniform tender, fleshy texture, typical of well-ripened, properly prepared and properly processed canned apricots; the units may be soft but hold their original conformation and size without material disintegration.

(2) *Reasonably good character.* "Reasonably good character" means that the units have a reasonably uniform, reasonably tender texture typical of properly ripened canned apricots that

are properly processed; the texture is reasonably fleshy, and the units are reasonably thick but the tenderness may be variable within the unit or among the units; the units may be soft to slightly firm, but are not mushy, and may be slightly ragged.

(3) *Fairly good character.* "Fairly good character" means that the units have a texture of properly processed apricots which may be variable in fleshiness but the texture is fairly fleshy; the units may be lacking uniformity of tenderness; the units may be very soft to moderately firm, and markedly ragged with frayed edges.

(4) *Poor character.* "Poor character" means the units may be lacking in fleshiness; may be not tender or may be very firm or may be mushy.

(c) (*A*) *classification.* Halves, slices, and whole canned apricots that have a good character may be given a score of 27 to 30 points. To score in this classification, the number of units that possess reasonably good character does not exceed the number specified for the style in § 52.2655.

(d) (*B*) *classification.* Halves, slices, and whole canned apricots that possess a reasonably good character may be given a score of 24 to 26 points. Canned apricots of mixed pieces of irregular sizes and shapes that possess at least a reasonably good character may be given a score of 32 to 40 points and shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). To score in this classification, the number of units that possess fairly good character does not exceed the number specified for the style in § 52.2655.

(e) (*C*) *classification.* Halves, slices, whole canned apricots that possess a fairly good character may be given a score of 21 to 23 points. Canned apricots of mixed pieces of irregular sizes and shapes that possess a fairly good character may be given a score of 28 to 31 points. Canned apricots that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). To score in this classification, the number of units that possess poor character does not exceed the number specified for the style in § 52.2655.

(f) (*SStd*) *classification.* Canned apricots that fail to meet the character requirements for Grade C may be given a score of 0 to 20 points for the styles of halves, slices and whole, and 0 to 27 points for mixed pieces of irregular sizes and shapes, and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

ALLOWANCES FOR QUALITY FACTORS

§ 52.2655 Allowances for quality factors for canned apricots.

TABLE IV—STYLES: HALVES AND WHOLE

Factors	Maximum allowances permitted per sample unit [1]		
	A	B	C
Color (Number of halves):			
Reasonably well colored	2	No limit	No limi
Fairly well colored	0	5	No limi
Poorly colored	0	0	5
Uniformity of size (number of units)			
Weight variation			
Whole:			
More than 50%	1	No limit	No limi
More than 75%	0	1	No limi
More than 100%	0	0	3
Halves:			
More than 50%	3	No limit	No limi
More than 75%	0	3	No limi
More than 100%	0	0	5

TABLE IV—STYLES: HALVES AND WHOLE—Continued

Factors	Maximum allowances permitted per sample unit [1]		
	A	B	C
Halves:			
Off suture cuts	2	7	15
	and	including	including
Detached and partially detached pieces	2	7	15
Defects:			
Harmless extraneous material (number of pieces)	0	1 (avg. 0.5)	2
Short stem (count)	2	3	5
Peel	¼ sq in	¾ sq in	1¼ sq in
Loose pits (whole style only-count)	3	5	5
Pit material (halves-count)	3 (avg. 1)	3 (avg. 1)	3 (avg. 1)
Crushed or Broken:			
Halves	2	2	2
Whole	1	1	1
Blemished-halves-minor	5	10	20
	including	including	including
Major	2	5	10
Whole—Minor	5	10	20
	including	including	including
Major	1	2	5
Character (Halves):			
Reasonably good	2	No limit	No limit
Fairly good	0	5	No limit
Poor	0	0	5
(Whole)			
Reasonably good	1	No limit	No limit
Fairly good	0	2	No limit
Poor	0	0	2

[1] Additional sample average (average of all sample units) requirement denoted by "(avg. ——)."

TABLE V—STYLES SLICES

Factors	Maximum allowances permitted per sample unit [1]		
	A	B	C
Color:			
Reasonably well colored	2	No limit	No limit
Fairly well colored	0	5	No limit
Poorly colored	0	0	5
Defects:			
Harmless extraneous material (number of pieces)	0	1 (avg. 0.15)	1 (avg. 0.5)
Short stems	1 (avg. 0.5)	1	2 (avg. 1.5)
Peel	3/32 sq in	3/16 sq in	3/16 sq in
Pit material (count)	1 (avg. 0.3)	1 (avg. 0.3)	1 (avg. 0.3)
Blemished—Minor	3	6	10
	including	including	including
Major	1	3	5
Character:			
Reasonably good	2	No limit	No limit
Fairly good	0	5	No limit
Poor	0	0	5

[1] Additional sample average (average of all sample units) requirements denoted by "(avg. ——)."

TABLE VI—STYLE: MIXED PIECES OF IRREGULAR SIZES AND SHAPES

Factors	Maximum allowances permitted per sample unit [1]		
	A	B	C
Color (ounces):			
Reasonably well colored	2	No limit	No limit
Fairly well colored	0	3	No limit

TABLE VI—STYLE: MIXED PIECES OF IRREGULAR SIZES AND SHAPES—Continued

Factors	Maximum allowances permitted per sample unit [1]		
	A	B	C
Poorly colored	0	0	3
Defects:			
Harmless extraneous material (No. of pieces)	0	1 (avg. 0.6)	2
Short stems (count)	4	4	6
Peel (peeled style only)	½ sq in	½ sq in	1 sq in
Pit material (count)	2 (avg. 0.7)	2 (avg. 0.7)	2 (avg. 0.7)
Blemished—Minor (oz)	1.5 including	3 including	6 including
Major (oz)	0.75	1	3
Character (ounces):			
Reasonably good	1.5	No limit	No limi
Fairly good	0	3	No limi
Poor	0	0	3

[1] Additional sample average (average of all sample units) requirements denoted by "(avg. ——)."

LOT INSPECTION AND CERTIFICATION

§ 52.2656 Ascertaining the grade of a lot.

The grade of a lot of canned apricots covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.83).

SCORE SHEET

§ 52.2657 Score sheet for canned apricots.

Size and kind of container
Container mark or identification
Label
Net weight (ounces)
Vacuum (inches)
Drained weight (ounces): ( ) Heavy pack
Brix measurement
Sirup designation (Extra heavy, heavy, etc.)
Style
Count (halves, whole)

Factors	*	**		Score points
Color	20	0	(A)	18-20
			(B)	[2] 16-17
			(B) Mixed pieces	16-20
			(C)	[1] 14-15
			(SStd)	[1] 0-13
Uniformity of size and symmetry	20	20	(A)	18-20
			(B)	[2] 16-17
			(C)	[2] 14-15
			(SSTd)	[1] 0-13
Defects	30	40	(A)	27-30
			(B)	[1] 24-26
			(B) Mixed pieces	32-40
			(C)	[1] 21-23
			(C) Mixed pieces	[1] 28-31
			(SStd)	[1] 0-20
			(SStd) Mixed pieces	[1] 0-27
Character	30	40	(A)	27-30
			(B)	[2] 24-26
			(B) Mixed pieces	[1] 32-40
			(C)	[1] 21-23
			(C) Mixed pieces	[1] 28-31
			(SStd)	[1] 0-20
			(SStd) Mixed pieces	[1] 0-27
Total score	100	100		

Varietal characteristics: ( ) Similar; ( ) Dissimilar
Normal flavor and odor
Grade

*Halves, slices, whole.
**Mixed pieces of irregular sizes and shapes.
[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Pimientos

SOURCE: 32 FR 13373, Sept. 22, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY AND TYPES OF PACK

§ 52.2681 Identity.

(a) "Canned pimientos" means the canned product properly prepared from clean, sound, succulent pods of the pimiento plant (Capsicum annuum) as such product is defined in the standard of identity for canned pimientos (21 CFR 155.200) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(b) For the purposes of these grade standards "Pimientos" are a group of sweet peppers of the pimiento-type or Spanish pepper. This group includes Pimiento, Perfection, Truheart, and similar varieties. Pimiento fruit pods are smooth, typically conical or heart-shaped, pointed at the blossom end, thick walled, red to reddish-yellow color, and possess a mild and sweet distinct pimiento flavor.

(c) The finished product is prepared from peeled pods and may contain acidifying and firming agents and any other ingredient permissible under the provisions of the Federal Food, Drug, and Cosmetic Act.

§ 52.2682 Types of pack.

(a) Regular pack (see Table I).

(b) Heavy pack (see Table I).

§ 52.2683 Styles of canned pimientos.

(a) "Whole" or "whole pimientos" means pimientos that retain the approximate conformation of a whole pod pimiento.

(b) "Halves" or "halved" means pimientos cut longitudinally into two approximately equal parts.

(c) "Pieces" means pimientos cut or broken into units with at least 1 square inch area each and may include less than 50 percent, by weight, of whole pods.

(d) "Whole and pieces" means pimientos consisting of a combination of whole and pieces of pimientos and containing not less than 50 percent, by weight, of whole pimientos.

(e) "Slices" or "sliced" means pimientos sliced into strips.

(f) "Diced" means pimientos cut into approximate cube-shaped units or cut into approximately square pieces.

(g) "Chopped" means pimientos cut or broken into units of less than 1 square inch area each.

§ 52.2684 Grades of canned pimientos.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned pimientos that possess similar varietal characteristics; possess a normal flavor; and for the applicable type and style: (1) Possess a good color; (2) are practically uniform or fairly uniform in size for the applicable styles; (3) are practically free from defects; (4) possess a good character; and (5) score not less than 90 points as outlined in this subpart.

(b) "U.S. Grade C" (or "U.S. Standard") is the quality of canned pimientos that possess similar varietal characteristics; possess a normal flavor; and for the applicable type and style: (1) Possess a fairly good color; (2) are fairly uniform in size and shape for the applicable styles; (3) are fairly free from defects; (4) possess a fairly good character; and (5) score not less than 80 points as outlined in this subpart.

(c) "Substandard" is the quality of canned pimientos that fail to meet the requirements of U.S. Grade C.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.2685 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned pimientos be filled with pimientos as full as practicable without impairment of quality.

§ 52.2686 Recommended drained weight.

The drained weight recommendations in Table I are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of pimientos is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch [0.0937-inch (2.38 mm.), ±3%, square openings] so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. A sieve 8 inches in diameter is used for No. 2½ size cans (401 × 411) and smaller sizes, and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

§ 52.2687 Compliance with recommended drained weights.

Compliance with the recommended drained weights in Table I is determined by averaging the drained weights from all the containers in the sample which represents a specific lot; and such lot is considered as meeting the recommendations if the following criteria are met:

(a) The sample average meets the recommended minimum drained weight; and

(b) The containers which do not meet the recommended minimum drained weight are within the range of variability of good commercial practice and there is no unreasonable shortage of pimientos in any container.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS OF PIMIENTOS

[In ounces]

Metal or glass container designation	Metal (container dimension) inches and sixteenths	Capacity Avdp. ozs. of water at 68° F (Weight)	Style of pimientos				
			Whole; halves	Whole and pieces	Pieces	Diced; chopped	Sliced
2 Z Jar		2.28	1.5	1.5	1.5	1.5	1.
4 Z Pimiento	211 × 200	4.90	3.2	3.2	3.2	3.2	3.
4 Z Jar		4.88	3.2	3.2	3.2	3.2	3.
7 Z Pimiento	300 × 206	7.50	5.2	5.2	5.2	5.2	5.
7 Z Jar		8.10	5.3	5.3	5.3	5.3	5.
No. 300	300 × 407	15.20	10.0	10.2	10.2	10.2	10.0
No. 303	303 × 406	16.85	11.0	11.2	11.2	11.2	11.0
No. 303 Jar		17.65	11.2	11.5	11.5	11.5	11.2
No. 2	307 × 409	20.50	13.2	13.5	14.0	14.0	13.2
No. 2½	401 × 411	29.75	20.2	20.5	20.5	20.5	20.2
No. 2½ Jar		29.38	20.0	20.2	20.2	20.2	20.0
No. 10	603 × 700	109.45	70.7	72.2	74.0	74.0	71.7
Containers of different capacities than above			Not less than 66 percent of the water capacity (avoirdupois weight at 68° F.) of the container.				
Heavy pack			Little free liquid and drained weight is not less than 90 percent of the water capacity (avoirdupois weight at 68° F.) of the container.				

FACTORS OF QUALITY

§ 52.2688 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit is ascertained by considering certain factors which are not scored; the ratings for the factors of color, uniformity of size and shape, defects, and character which are scored; the total score; and the limiting rules which may apply.

(b) *Factors not rated by score points.*

(1) Varietal characteristics.

(2) Flavor: "Normal flavor" means that the canned pimientos have a good, characteristic, mild but distinct pimiento flavor and are free from objectionable or bitter flavors and objectionable odors of any kind.

(c) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	30
Uniformity of size and shape	20
Defects	40
Character	10
Total	100

§ 52.2689 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "27 to

30 points" means 27, 28, 29, or 30 points).

§ 52.2690 Color.

(a) *Evaluation of color.* The evaluation of color of canned pimientos shall be determined immediately after opening the container. The color is based upon the brightness and the uniformity of the exterior red to reddish-yellow color of the units. Green or dull oxidized reddish-brown units are scored under this factor when the overall color is affected.

(b) *Color standards.* The color of the units is classified by using the USDA plastic color standards for canned pimientos as follows:

(1) "Pimiento Red" means a red color equal to or more red than the USDA Pimiento Red color standard.

(2) "Pimiento Reddish-Yellow" means a reddish-yellow color equal to or more red than USDA Pimiento Reddish-Yellow but less red than USDA Pimiento Red color standard.

(3) Information regarding these color standards may be obtained from:

Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

(c) (*A*) *classification.* Canned pimientos that possess a good color may be given a score of 27 to 30 points. "Good color" means that the overall color of the product is bright, practically uniform, and typical of canned pimientos; and that the color on the exterior surfaces complies with the requirements for the applicable style as outlined in Table II.

(d) (*C*) *classification.* If the canned pimientos possess a fairly good color, a score of 24 to 26 points may be given. Canned pimientos that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the overall color of the product may be variable and slightly dull but none of the units may be green or of a greenish cast or off color; and the color on the exterior surface complies with the applicable style as outlined in Table II.

(e) (*SStd*) *classification.* Canned pimientos that fail to meet the requirements of paragraph (d) of this section or that are definitely off color may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE II—COLOR CLASSIFICATION OF CANNED PIMIENTOS

Grade	Style(s)	USDA pimiento red ($\frac{9}{10}$ or more of surface area on each unit)	USDA pimiento red ($\frac{3}{4}$ or more of surface area on each unit)	USDA pimiento reddish-yellow	USDA pimiento reddish-yellow ($\frac{9}{10}$ or more of surface area on each unit)	USDA pimiento reddish-yellow ($\frac{3}{4}$ or more of surface area on each unit)	USDA pimiento reddish-yellow
A classification.	Whole, halves, whole and pieces.	Minimum 90 percent, by count, of units.[1]		Remainder of surface areas may be no less red.			
	Pieces	Minimum 90 percent, by weight, of units.		do			
	Sliced, diced, chopped.		Minimum 90 percent, by weight, of units.	do			

TABLE II—COLOR CLASSIFICATION OF CANNED PIMIENTOS—Continued

Grade	Style(s)	USDA pimiento red (9/10 or more of surface area on each unit)	USDA pimiento red (3/4 or more of surface area on each unit)	USDA pimiento reddish-yellow	USDA pimiento reddish-yellow (9/10 or more of surface area on each unit)	USDA pimiento reddish-yellow (3/4 or more of surface area on each unit)	USDA pimiento reddish-yellow
C classification.	Whole, halves, whole and pieces.				Minimum 90 percent, by count, of units [1].		Remainder of surface areas may be less red.
	Pieces				Minimum 90 percent, by weight, of units.		Do.
	Sliced, diced, chopped.					Minimum 90 per cent, by weight, of units.	Do.

[1] Except permit 1 unit to fail in any container with less than 10 units, provided, the average of all sample units from the lot meets the percent, by count, tolerance.

§ 52.2691 Uniformity of size and shape.

(a) *Ascertaining dimensions*—(1) *Width of whole and halved pimientos.* The width is the widest surface measured at right angles to the longitudinal axis of the flattened pimiento pod.

(2) *Length of whole and halved pimientos.* The length is the longest surface measured from the stem end to blossom end of the flattened pimiento pod.

(3) *Square area measurement of a piece.* The square area of a piece is calculated by multiplying the average width times the average length of the flattened single wall piece.

(4) *Length and width of sliced pimientos.* The length of a slice is the longest measurement. The width of a slice is the widest flat surface measured at right angles to the length.

(5) *Size of diced pimientos.* The size of a dice is measured along the edge which is most representative of the cube's size.

(b) *Definitions of shapes, sizes, and trim.* (1) "Other shapes and sizes" means noticeably large or small units that vary in shape and size from normal units of the style; and in diced style means units smaller than one-half the volume of an average size cube.

(2) "Very small pieces" in sliced style means units shorter than one-half inch length.

(3) "Well trimmed" in whole style means that the pod is neatly trimmed at the stem end and when trimmed at the blossom end the normal size and shape of the pod is substantially preserved.

(4) "Fairly well trimmed" means that the unit is trimmed but not mutilated to such an extent as to seriously affect the appearance of the pod.

(c) *(A) classification.* Canned pimientos that are practically uniform in size and shape may be given a score of 18 to 20 points. "Practically uniform in size and shape" means that most of the pods are well trimmed and that:

(1) The pimientos comply with the measurement, shape, and uniformity requirements for (A) classification in Table III; and

(2) Any such variation does not materially detract from the overall appearance of the product.

(d) *(C) classification.* If the canned pimientos are fairly uniform in size and shape, a score of 16 or 17 points may be given. "Fairly uniform in size and shape" means that most of the pods are at least fairly well trimmed and that:

(1) The pimientos comply with the measurement, shape, and uniformity requirement for (C) classification in Table III; and

(2) Any such variation does not seriously detract from the overall appearance of the product.

(e) (*SStd.*) *classification.* Canned pimientos that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE III—UNIFORMITY OF SIZE AND SHAPE FOR CANNED PIMIENTOS

Styles	A classification		C classification	
	Measurement and/or shape of individual unit	Uniformity of all units in container (unless indicated otherwise)	Measurement and/or shape of individual unit	Uniformity of all the units in container (unless indicated otherwise)
Whole or halved	Minimum 1½ inches in any dimension (does not apply to a piece when added to assure well filled container).	Largest unit does not exceed smallest unit by more than ¾ inch in any dimension.[1] Maximum 25 percent, by count, of whole pods may be split the full length of pod.	Minimum 1¼ inches in any dimension (does not apply to a piece when added to assure well filled container).	Largest unit does not exceed smallest unit by more than 1 inch in any dimension.[1]
Whole and pieces	Minimum 1½ inches in any dimension of whole. Minimum 1 square inch per piece.	Largest whole does not exceed smallest whole by more than ¾ inch in any dimension.[1] Maximum 5 percent, by weight, of pieces less than 1 square inch each.	Minimum 1¼ inches in any dimension of whole. Minimum 1 square inch per piece.	Largest whole does not exceed smallest whole by more than 1 inch in any dimension.[1] Maximum 10 percent, by weight, of pieces less than 1 square inch each.
Pieces	Minimum 1 square inch.	Maximum 5 percent, by weight, of pieces less than 1 square inch each.	Minimum 1 square inch.	Maximum 10 percent, by weight, of pieces less than 1 square inch each.
Sliced	Minimum 1¼ inches length.	Maximum 35 percent, by weight, of units less than 1¼ inches in length, provided very small pieces do not materially affect the appearance.	Minimum 1¼ inches length.	Maximum 35 percent, by weight, of units less than 1¼ inches in length, provided very small pieces do not exceed 25 percent, by weight, of units.
Diced	Maximum ½ inch. Approximate cube or square pieces.	Maximum 15 percent, by weight, of other shapes and sizes of units.	Maximum ½ inch. Approximate cube or square pieces.	Maximum 25 percent, by weight, of units of other shapes and sizes of units.
Chopped	Less than 1 square inch.	Maximum 5 percent, by weight, of units larger than 1 square inch each.	Less than 1 square inch.	Maximum 10 percent, by weight, of units larger than 1 square inch each.

[1] In containers with 10 or more units, requirements apply only to the 90 percent, by count, of most uniform units. In containers with less than 10 units disregard least uniform unit, and apply to remainder of units.

§ 52.2692 Defects.

(a) *General.* Defects refers to the degree of freedom from grit, sand, silt, seeds, core and stem material, peel (except insignificant pieces of charred peel at the stem end and the blossom end), units blemished internally or externally by brown or black discoloration, pathological injury or insect injury; and any other defects not specifically defined which affect the appearance or edibility of the units or the product.

(b) (*A*) *classification.* Canned pimientos that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that any combination of defects present, including the maximum limits for peel and seeds for (A) classification in Table IV, may no more than slightly detract from the appearance or edibility of the product.

TABLE IV—MAXIMUM ALLOWANCES FOR PEEL AND SEEDS IN CANNED PIMIENTOS

Defect	A classification	C classification
Peel	Average—¼ square inch per 5 ounces (avoir.) of total contents.	Average—½ square inch per 5 ounces (avoir.) of total contents.
Seeds[1]—Styles:		
Whole, halved, whole and pieces.	Average—6 seeds per pod (or equivalent size of a whole pod).	Average—12 seeds per pod (or equivalent size of a whole pod).
Pieces, sliced, diced, chopped.	Average—5 seeds per ounce (avoir.) of total contents.	Average—8 seeds per ounce (avoir.) of total contents.

[1] Undeveloped seeds are not counted in tolerances.

(c) (*C*) *classification.* Canned pimientos that are fairly free from defects may be given a score of 32 to 35 points. Canned pimientos that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any combination of defects present, including the maximum limits for peel and seeds for (C) classification in Table IV, does not seriously detract from the appearance or edibility of the product.

(d) (*SStd.*) *classification.* Canned pimientos that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2693 Character.

(a) *General.* The factor of character refers to the tenderness, texture, and firmness of the unit and the condition and thickness of the flesh.

(b) (*A*) *classification.* Canned pimientos that possess a good character may be given a score of 9 or 10 points. "Good character" means the units are firm and full fleshed and tender without apparent disintegration, and possess a practically uniform texture.

(c) (*C*) *classification.* If the canned pimientos possess a fairly good character a score of 8 points may be given. Canned pimientos that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the units may be somewhat lacking in firmness and fleshiness and may show some evidence of disintegration but are not soft or mushy nor tough.

(d) (*SStd.*) *classification.* Canned pimientos that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 7 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT COMPLIANCE

§ 52.2694 Ascertaining the grade of a lot.

The grade of a lot of canned pimientos covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.2695 Score sheet for canned pimientos.

Size and kind of container ....
Container marks or identification..........
Label..........
Net weight (ounces)..........
Vacuum (inches)..........
Drained weight (ounces)..........
Type of pack: (   ) regular; (   ) heavy pack ....
Style (whole, halves, pieces, sliced, etc.) ....
Size of whole pimientos (inches) ....
Count of whole pimientos..........

Factors		Score points	
Color	30	(A)	27-30
		(C)	[1]24-26
		(SStd)	[1]0-23
Uniformity of size and shape	20	(A)	18-20
		(C)	16-17
		(SStd)	[1]0-15
Defects	40	(A)	36-40
		(C)	[1]32-35
		(SStd)	[1]0-31
Character	10	(A)	9-10
		(C)	[1]8
		(SStd)	[1]0-7
Total score	100		

Normal flavor and odor ....

Grade

---

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Pumpkin and Canned Squash

SOURCE: 21 FR 829, Feb. 7, 1956, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.2741 Product description.

"Canned pumpkin" and "canned squash" is the canned product prepared from clean, sound, properly matured, golden fleshed, firm shelled, sweet varieties of either pumpkins or squashes by washing, stemming, cutting, steaming and reducing to a pulp. The product is properly sieved and finished in accordance with good commercial practice and is then sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

§ 52.2742 Grades of canned pumpkin and canned squash.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned pumpkin or canned squash that possesses a good color; that possesses a good consistency; that possesses a good finish; that is practically free from defects; that possesses a normal flavor; and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned pumpkin or canned squash that possesses a fairly good color; that possesses a fairly good consistency; that possesses a fairly good finish; that is fairly free from defects; that possesses a normal flavor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned pumpkin or canned squash that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.2743 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full as practicable with pumpkin or squash and that the product occupy not less than 90 percent of the volume of the container.

FACTORS OF QUALITY

§ 52.2744 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factor which is not scored.* (i) Flavor.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Consistency	30
Finish	20
Defects	30
Total score	100

(b) The product is scored for quality at a temperature of approximately 68 degrees Fahrenheit.

(c) "Normal flavor" means that the product is free from objectionable flavors or objectionable odors of any kind.

§ 52.2745 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "25 to 30 points" means 25, 26, 27, 28, 29 or 30 points.)

§ 52.2746 Color.

(a) *(A) classification.* Canned pumpkin or canned squash that possesses a good color may be given a score of 18 to 20 points. "Good color" means that the product possesses a practically uniform bright color typical of canned pumpkin or canned squash prepared from well matured pumpkin or squash.

(b) *(C) classification.* If the canned pumpkin or canned squash possesses a fairly good color, a score of 14 to 17 points may be given. Canned pumpkin or canned squash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the product possesses a color typical of fairly well matured pumpkin or squash and may possess a slight tinge of gray or tan color, may be variable or slightly dull but not to the extent that the appearance or eating quality is materially affected.

(c) *(SStd.) classification.* Canned pumpkin or canned squash that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.2747 Consistency.

(a) *(A) classification.* Canned pumpkin or canned squash that possesses a good consistency may be given a score of 25 to 30 points. "Good consistency" means that the canned pumpkin or canned squash, after emptying from the container to a dry-flat surface, retains the approximate shape of the container, or holds a high mound formation, and at the end of two minutes after emptying on such surface the highest point of the mound is not less than 60 percent of the height of the container, except with respect to No. 3 size can or larger the highest point of the mound is not less than 50 percent of the height of the container, and irrespective of can size not more than 10 cubic centimeters of free liquor separates for each 30 ounces of net contents.

(b) *(C) classification.* If the canned pumpkin or canned squash possesses a fairly good consistency, a score of 21 to 24 points may be given. Canned pumpkin or canned squash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product (this is a limiting rule). "Fairly good consistency" means that the canned pumpkin or canned squash, after emptying from the container to a dry-flat surface, may flow just enough to level off to a nearly uniform depth or may be moderately mounded and at the end of two minutes after emptying on such surface that not more than 30 cubic centimeters of free liquor separates for each 30 ounces of net contents.

(c) *(SStd.) classification.* Canned pumpkin or canned squash that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.2748 Finish.

(a) *General.* The factor of finish refers to the texture of the product and evenness of the pumpkin or squash particles.

(b) *(A) classification.* Canned pumpkin or canned squash that possesses a good finish may be given a score of 17 to 20 points. "Good finish" means that the canned pumpkin or canned squash particles are evenly divided; that the product is fine grained, smooth but not pasty and the pumpkin or squash particles are not hard.

(c) *(C) classification.* Canned pumpkin or canned squash that possesses a fairly good finish may be given a score of 14 to 16 points. "Fairly good finish" means that the canned pumpkin or canned squash particles are evenly divided; that the product may be slightly coarse; may be slightly pasty but not decidedly pasty and the pumpkin or squash particles are not hard.

(d) *(SStd.) classification.* Canned pumpkin or canned squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard regard-

less of the total score for the product (this is a limiting rule).

§ 52.2749 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from sand, grit, or silt, pieces of seed, fiber, and coarse, dark or off-colored particles.

(1) "Grit, sand, or silt" means any particle of earthy material.

(b) (*A*) *classification.* Canned pumpkin or canned squash that is practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means that no grit, sand, or silt may be present that affects the appearance or eating quality of the canned pumpkin or canned squash, and that the number, size, or color of the aforesaid defects present, individually or collectively, do not more than slightly affect the appearance or eating quality of the product.

(c) (*C*) *classification.* Canned pumpkin or canned squash that is fairly free from defects may be given a score of 21 to 24 points. Canned pumpkin or canned squash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score for the product, (this is a limiting rule). "Fairly free from defects" means a trace of grit, sand, or silt may be present that does not materially affect the appearance or eating quality of the canned pumpkin or canned squash, and that any of the other aforesaid defects present, individually or collectively, may be noticeable but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or eating quality of the product.

(d) (*SStd.*) *classification.* Canned pumpkin or canned squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard regardless of the total score for the product, (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2750 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2751 Score sheet for canned pumpkin and canned squash.

Size and kind of container
Container mark or identification
Label
Net weight (in ounces)
Vacuum (in inches)

Factors		Score points	Av score
Color	20	(A)	18-20
		(C)	[1] 14-17
		(SStd.)	[1] 0-13
Consistency	30	(A)	25-30
		(C)	[1] 21-24
		(SStd.)	[1] 0-20
Finish	20	(A)	17-20
		(C)	14-16
		(SStd.)	[1] 0-13
Defects	30	(A)	25-30
		(C)	[1] 21-24
		(SStd.)	[1] 0-20
Total score	100		

Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Apple Butter

SOURCE: 22 FR 4710, July 4, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

IDENTITY AND GRADES

§ 52.2801 Identity.

Apple butter is a fruit butter prepared from clean, sound, wholesome, mature apples (either fresh, frozen, canned and/or dried) and other ingredients as defined in the amended Standards of Identity for Fruit Butter (21 CFR 155.110) issued pursuant to the Federal Food, Drug and Cosmetic Act. The apples are prepared by cooking, with or without added water, and the skins, seeds, and cores are screened out. The soluble solids are not less than 43 percent.

§ 52.2802 Grades of apple butter.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of apple butter that possesses a good color; that possesses a good consistency; that possesses a good finish; that is practically free from defects; that possesses a good flavor, and that scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of apple butter that possesses a fairly good color; that possesses a fairly good consistency; that possesses a fairly good finish; that is fairly free from defects; that possesses a fairly good flavor, and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of apple butter that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.2803 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of apple butter be filled as full as practicable without impairment of quality and that the product occupy not less than 90 percent of the capacity of the container.

FACTORS OF QUALITY

§ 52.2804 Ascertaining the grade of a sample unit.

(a) The grade of a sample unit of apple butter is ascertained by considering the factors of quality which are scored. The relative importance of each such factor is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Consistency	20
Finish	20
Defects	20
Flavor	20
Total score	100

§ 52.2805 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, or 20 points.)

§ 52.2806 Color.

(a) *General.* Information concerning the USDA Apple Butter Color Standards, referred to in this section, may be obtained by writing to the Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C., 20250.

(b) (*A*) *classification.* Apple butter that possesses a good color may be given a score of 17 to 20 points. "Good color" means a lustrous, practically uniform color characteristic of properly prepared and properly processed apple butter. Such color may be moderately reddish brown or moderately dark brown but is equal to or better than USDA Apple Butter Color Standard No. 1 or USDA Apple Butter Color Standard No. 2, whichever most nearly matches the color of the apple butter.

(c) (*C*) *classification.* If the apple butter possesses a fairly good color a score of 14 to 16 points may be given. Apple butter that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a characteristic apple butter color which may be somewhat lacking in luster. Such color may be dark brown or light brown but is equal to or better than USDA Apple Butter Color Standard No. 3 or USDA Apple Butter

Color Standard No. 4, whichever most nearly matches the color of the apple butter.

(d) (*SStd.*) *classification.* Apple butter that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2807 Consistency.

(a) *General.* The factor of consistency refers to the viscosity of the product and to the degree of separation of free liquor.

(b) (*A*) *classification.* Apple butter that possesses a good consistency may be given a score of 17 to 20 points. "Good consistency" means that the apple butter after stirring and emptying from the container to a dry flat surface forms a moderately mounded mass and that at the end of two minutes there is practically no separation of free liquor.

(c) (*C*) *classification.* Apple butter that possesses a fairly good consistency may be given a score of 14 to 16 points. Apple butter that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good consistency" means that the apple butter after stirring may possess a thick consistency so that it does not pour readily from the container or after emptying from the container to a dry flat surface may form only a slightly mounded mass and at the end of two minutes there is no more than a slight separation of free liquor.

(d) (*SStd.*) *classification.* Apple butter that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2808 Finish.

(a) *General.* The factor of finish refers to the size and texture of the apple particles.

(b) (*A*) *classification.* Apple butter that possesses a good finish may be given a score of 17 to 20 points. "Good finish" means that the apple particles are evenly divided; that the product is fine grained and smooth.

(c) (*C*) *classification.* If the apple butter possesses only a fairly good finish a score of 14 to 16 points may be given. Apple butter that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good finish" means that the apple particles are evenly divided; that the product may be slightly coarse; but the apple particles are neither hard nor excessively grainy.

(d) (*SStd.*) *classification.* Apple butter that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2809 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from such defects as black specks, dark scale-like particles, particles of carpel tissue, peel, stem, seed-coat, and blossom-end material. This factor is evaluated by observing a layer of the product on a smooth white surface. Such a layer is prepared by drawing a scraper, with an identation $\frac{3}{32}$ inch high by 7 inches long for clearance, rapidly through the product in two horizontal planes so as to form an approximate square.

(b) (*A*) *classification.* Apple butter that is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or edibility of the product.

(c) (*C*) *classification.* If the apple butter is fairly free from defects a score of 14 to 16 points may be given. Apple butter that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present may be noticeable but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or edibility of the product.

(d) (*SStd.*) *classification.* Apple butter that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2810 Flavor.

(a) *General.* The score for the factor of flavor of apple butter is ascertained by considering the flavor and aroma of the apple butter with particular consideration being giving to the prominence and excellence of the flavor of the apple ingredient.

(b) (*A*) *classification.* Apple butter that possesses a good flavor may be given a score of 17 to 20 points. "Good flavor" means a good and distinct flavor and aroma characteristic of properly prepared and properly processed apple butter prepared from good quality ingredients.

(c) (*C*) *classification.* If the apple butter possesses a fairly good flavor a score of 14 to 16 points may be given. Apple butter that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means a characteristic apple butter flavor and odor that may be excessively sweet or excessively tart, may be excessively spiced or lacking in proper spicing, or may be excessively carmelized but is not seriously objectionable for any reason.

(d) (*SStd.*) *classification.* Apple butter that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2811 Ascertaining the grade of a lot.

The grade of a lot of apple butter covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.2812 Score sheet for apple butter.

Size and kind of container ....
Label ....
Container mark or identification ....
Net weight (ounces) ....
Soluble solids (percent by refractometer) ....

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Consistency	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Finish	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Defects	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Flavor	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Kadota Figs

SOURCE: 38 FR 13355, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2821 Product description.

(a) *Canned figs.* "Canned figs" is the product represented as defined in the Standard of Identity (21 CFR 145.130 and 145.131) for canned figs and canned artificially sweetened canned figs, respectively, issued pursuant to the Federal Food, Drug, and Cosmetic Act.

(b) *Canned Kadota figs.* "Canned Kadota figs" are canned figs of the Kadota variety. The provisions of the standards in this subpart cover canned Kadota figs only.

[38 FR 13355, May 21, 1973, as amended at 41 FR 15022, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2822 Styles.

(a) *Style I.* Whole.

(b) *Style II.* Whole and split (or broken).

(c) *Style III.* Split (or broken) and whole.

(d) *Style IV.* Split (or broken).

§ 52.2823 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned Kadota figs of Style I, Whole, that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a good color; that are practically uniform in size for Style I, Whole, figs; that are practically free from defects, that possess a good character, and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided,* That canned Kadota figs may possess a reasonably good color; that Style I, Whole, figs may be reasonably uniform or fairly uniform in size; and may possess a reasonably good character, if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned Kadota figs of Style I, Whole, that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a reasonably good color; that are reasonably uniform in size for Style I, Whole, figs; that are reasonably free from defects, that possess a reasonably good character, and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided,* That Style I, Whole, figs may be fairly uniform in size, if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned Kadota figs of any style that possess similar varietal characteristics, that possess a normal flavor and odor, that possess a fairly good color; that are fairly uniform in size for style I, whole, figs; that are fairly free from defects, that possess a fairly good character, and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided,* That style I, whole, figs may vary in size if the total score is not less than 70 points.

(d) "Substandard" is the quality of canned Kadota figs that fail to meet the requirements of "U.S. Grade C" or "U.S. Standard".

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.2824 Liquid media and Brix measurements.

Cut-out requirements for liquid media in Canned Kadota Figs are not incorporated in the grades of the product since sirup or any other liquid medium, as such, is not a factor of quality for the purpose of these grades. The cut-out Brix measurements, as applicable, for the respective designations are as follows:

Designations	Brix measurements
"Extra heavy sirup" or "Extra heavily sweetened fruit juice(s) and water," or "Extra heavily sweetened fruit juice(s)"	26° or more but not more than 35°
"Heavy sirup," or "Heavily sweetened fruit juice(s) and water," or "Heavily sweetened fruit juice(s)"	21° or more but less than 26°
"Light sirup," or "Lightly sweetened fruit juice(s) and water," or "Lightly sweetened fruit juice(s)"	16° or more but less than 21°
"Slightly sweetened water," or "Extra light sirup," or "Slightly sweetened fruit juice(s) and water," or "Slightly sweetened fruit juice(s)"	11° or more but less than 16°
"In water"	Not applicable
"In fruit juice(s) and water"	Do
"In fruit juice(s)"	Do
"Artificially sweetened"	Do

[41 FR 15022, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2825 Recommended fill of container.

The recommended fill of container for canned Kadota figs is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of canned Kadota figs be as full of figs as practicable without impairment of quality and that the product (including liquid medium) occupy not less than 90 percent of the volume of the container.

§ 52.2826 Recommended minimum drained weights.

(a) *General.* (1) The minimum drained weight recommendations in table I, for all styles of canned Kadota figs, are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for ascertaining drained weights.* The drained weight of canned Kadota figs is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-in. ±3 percent, square openings) so as to distribute the product evenly, including the sieve slightly to facilitate drainage, and allowing to drain for two minutes. The drained weight is the weight of the sieve and figs less the weight of the dry sieve. A sieve 8 in. in diameter is used for the equivalent of No. 3 size cans (404 x 414) and smaller, and a sieve 12 in. in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definitions of symbols.* (1) X_d—The average drained weight of all the sample units in the sample.

(2) *LL*—Lower limit for drained weights of individuals sample units.

(d) *Compliance with recommended drained weights.* A lot of canned Kadota figs is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended minimum average drained weight (designated as "X_d" in table I); and

(2) The number of sample units which fail to meet the recommended drained weight lower limit for individuals (designated as "*LL*" in table I) does not exceed the applicable acceptance number specified in the single sampling plan of table II.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED KADOTA FIGS

Container designations (metal, unless otherwise stated)	Container size, overall dimensions		Overflow capacity (fluid ounce)	All styles (and including canned dietetic Kadota figs) (ounces)	
	Width (inches)	Height (inches)		LL	X_d
8Z tall	211	304		4.2	5.0
8 oz glass			8.2	4.2	5.0
No. 300	300	407		8.1	9.0
No. 1 tall	301	411		9.0	10.0
No. 303	303	406		9.0	10.0
No. 303 glass			17.0	8.7	9.7
No. 2	307	409		11.5	12.5
No. 2½	401	411		16.6	18.0
No. 2½ glass			28.35	15.8	17.2
No. 10 (70 whole figs, or portions equivalent thereto, and less)	603	700		60.5	63.0
No. 10 (71 whole figs, or portions equivalent thereto, and more)				63.5	66.0

TABLE II—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29	38	48	60	72
Acceptance No	0	1	2	3	4	5	6	7	8

§ 52.2827 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations specified in table III are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weights.* Fill weight is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the minimum lot average fill weight.

LWL_s means the lower warning limit for subgroup averages.

LRL_s means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R' means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the Sampling Allowance Chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the United States Standards for Determination of Fill Weights.

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED KADOTA FIGS

Container designation (metal, unless otherwise stated)	X'_{min}	LWL_s	LRL_s	LWL	LRL	R'	R_{max}	Sampling allowance code
8Z tall	5.3	4.8	4.5	4.2	3.6	1.3	2.7	J
8 oz glass	5.3	4.8	4.5	4.2	3.6	1.3	2.7	J
No. 300	9.5	8.9	8.6	8.2	7.5	1.5	3.2	L
No. 1 tall whole	10.3	9.7	9.3	8.9	8.2	1.6	3.4	M
No. 1 tall other styles	10.6	10.0	9.6	9.2	8.5	1.6	3.4	M
No. 303 whole	10.5	9.9	9.5	9.1	8.4	1.6	3.4	M
No. 303 other styles	10.8	10.2	9.8	9.4	8.7	1.6	3.4	M
303 glass whole	10.2	9.6	9.2	8.8	8.1	1.6	3.4	M
No. 2 whole	12.8	12.1	11.8	11.3	10.5	1.7	3.7	N
No. 2 other styles	13.1	12.4	12.1	11.6	10.8	1.7	3.7	N
No. 2½ whole	19.0	18.1	17.6	17.0	16.0	2.3	4.9	S
No. 2½ other styles	19.2	18.3	17.8	17.2	16.2	2.3	4.9	S
2½ glass whole	18.2	17.3	16.8	16.2	15.2	2.3	4.9	S
2½ glass other styles	18.4	17.5	17.0	16.4	15.4	2.3	4.9	S
No. 10 whole	69.0	67.5	66.7	65.6	63.9	4.0	8.4	Z
No. 10 other styles	71.0	69.5	68.7	67.6	65.9	4.0	8.4	Z

FACTORS OF QUALITY

§ 52.2828 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maxi-

mum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size	20
Absence of defects	30
Character	30
Total score	100

(b) *Definition of flavor and odor.* "Normal flavor and odor" means that the canned Kadota figs (including the effects of added spices, seasonings, or flavorings) are free from objectionable flavors and objectionable odors of any kind.

§ 52.2829 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means "18, 19, or 20 points").

§ 52.2830 Color.

(a) (*A*) *classification.* Canned Kadota figs that possess a good color may be given a score of 18 to 20 points. "Good color" means a practically uniform, light amber or light greenish-yellow color that is bright and typical of properly processed canned Kadota figs; that not more than 5 percent, by count, of the figs may possess a reasonably good color; and that none of the figs possess a fairly good color.

(b) (*B*) *classification.* If the canned Kadota figs possess a reasonably good color, a score of 16 or 17 points may be given. "Reasonably good color" means a reasonably uniform and reasonably bright light green color that may lack a definite yellow cast but is typical of properly prepared and properly processed Kadota figs; and that not more than 10 percent, by count, of the figs may possess a fairly good color.

(c) (*C*) *classification.* If the canned Kadota figs possess a fairly good color, a score of 14 or 15 points may be given. Canned Kadota figs that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a fairly good color that may possess a green, slightly milky, or a light brown color and that the figs may vary moderately in such typical color, but not more than 5 percent, by count, of the figs may be off-color, or one unit in a container is permitted to be off-color if such unit exceeds the 5-percent allowance.

(d) (*SStd*) *classification.* Canned Kadota figs that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2831 Uniformity of size.

(a) *General.* The factor of uniformity of size for other than Style I, Whole, canned Kadota figs is not based on any detailed requirements and is not scored; the other three factors (color, absence of defects, and character) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) (*A*) *classification.* Canned Kadota figs of Style I, Whole, that are practically uniform in size may be given a score of 18 to 20 points. "Practically uniform in size" means that in containers with less than 20 units the weight of the largest whole fig does not exceed the weight of the smallest whole fig by more than 50 percent; or, that in containers with 20 or more units, in 95 percent, by count, of the units that are most uniform in weight, the weight of the largest whole fig does not exceed the weight of the smallest whole fig by more than 50 percent.

(c) (*B*) *classification.* If the canned Kadota figs of Style I, Whole, are reasonably uniform in size, a score of 16 or 17 points may be given. "Reasonably uniform in size" means that in containers with less than 20 units the weight of the largest whole fig does not exceed the weight of the smallest whole fig by more than 75 percent; or, that in containers with 20 or more units, in 95 percent, by count, of the units that are most uniform in weight, the weight of the largest whole fig does not exceed the weight of the smallest whole fig by more than 75 percent.

(d) (*C*) *classification.* If canned Kadota figs of Style I, Whole, are fairly uniform in size, a score cf 14 or 15 points may be given. "Fairly uniform in size" means that in containers with less than 20 units the weight of the largest whole fig may be not more than twice the weight of the smallest whole fig; or, that in containers with 20 or more units, in 95 percent, by count, of the units that are most uniform in weight, the weight of the largest whole fig may be not more than twice the weight of the smallest unit.

(e) (*SStd*) *classification.* Canned Kadota figs that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule).

§ 52.2832 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous material (such as leaves, stems); from split (or broken) figs including severed figs; from figs blemished with scab, scars, bruises, discoloration; from caprified figs; and from figs damaged by mechanical, pathological, insect injury, or similar injury.

(b) *Definitions of defects.* Figs that are blemished with scab, scars, bruises, discoloration, or other abnormalities or injury are considered under the classification of possessing "insignificant", "minor", or "major" defects.

(1) *Insignificant defects.* "Insignificant defects" include:

(i) Very light color surface scars of any size that blend with the color of the fig; and

(ii) Surface blemishes that are lighter than dark brown and that in the aggregate, singly or in combination on a unit, are less than the area of a circle one-fourth inch in diameter.

(2) *Minor defects.* "Minor" defects include:

(i) Surface blemishes that are lighter than dark brown and that equal or exceed in the aggregate, singly or in combination on a unit, the area of a circle one-fourth inch in diameter but do not exceed in the aggregate the area of a circle one-half inch in diameter;

(ii) Dark brown or black surface blemishes which in the aggregate, singly or in combination on a unit, are less than the area of a circle one-fourth inch in diameter; and

(iii) Slight insect injury that is not serious.

(3) *Major defects.* "Major" defects include:

(i) Caprified figs;

(ii) Surface blemishes that are lighter than dark brown and that exceed in the aggregate, singly or in combination on a unit, the area of a circle one-half inch in diameter;

(iii) Blemishes that extend into the fruit, worm holes, serious insect damage, or similar injury, regardless of the area; and

(iv) Dark brown or black surface blemishes which in the aggregate, singly or in combination on a unit, equal or exceed the area of a circle one-fourth inch in diameter but do not seriously affect the appearance of the unit.

(4) *Split (or broken) fig; severed fig.* A "split (or broken) fig" is one that is open to such an extent that the seed cavity is exposed, the shape of the fruit may be distorted, and the fruit may or may not be broken apart into entirely separate pieces. A "severed fig" is a split (or broken) fig which has been broken apart into entirely separate pieces. A fig that is only slightly cracked and retains its natural conformation without exposing the interior is not considered a split (or broken) fig.

(5) *Unit.* A "unit" or "unit of fig" in canned Kadota figs, for the purposes of ascertaining compliance with percentage allowances in this section means a "whole" fig; a split fig (or broken fig) which is not broken apart into entirely separate pieces; or portions of severed figs which are the approximate equivalent of a whole fig.

(c) (*A*) *classification.* Canned Kadota figs that are practically free from defects may be given a score of 27 to 30 points.

(1) To score in this classification, not more than 10 percent, by count, of the units may be split (or broken): *Provided,* That none are severed figs.

(2) "Practically free from defects" means that units which possess insignificant, minor, and major defects may be present which do not more than slightly affect the appearance of the product but that there may be present:

(i) Not more than 1 tough woody stem per 30 oz of total contents and no other harmless extraneous material; and

(ii) Not more than a total of 10 percent, by count, of the units may possess "minor" and "major" defects: *Provided,* That not more than 5 percent, by count, of the units may possess "major" defects. One unit in a container is permitted to possess "minor" or "major" defects; if such unit exceeds the respective allowances of 10 percent, or 5 percent, by count: *Provided,* That in all containers comprising the sample such units possessing "minor" and "major" defects do not exceed an average of 10 percent of the total number of units including not more than an average of 5 percent of the total number of units that may possess "major" defects.

(d) (*B*) *classification.* If the canned Kadota figs are reasonably free from defects, a score of 24 to 26 points may be given. Canned figs that fall into this classification shall not be graded above U.S. Grade B, or U.S. Choice, regardless of the total score for the product (this is a limiting rule).

(1) To score in this classification not more than 15 percent, by count, of the units may be split (or broken): *Provided,* That not more than 3 percent, by count, of the units may be severed figs. One unit in a container is permitted to be severed if such unit exceeds the 3 percent allowance: *Provided,* That in all containers comprising the sample such units do not exceed the average of 3 percent of the total number of units.

(2) "Reasonably free from defects" means that units which possess insignificant, minor, and major defects may be present which do not materially affect the appearance of the product but that there may be present:

(i) Not more than 2 tough woody stems per 30 ounces of total contents and not more than 1 piece of other harmless extraneous material per 100 ounces of total contents; and

(ii) Not more than a total of 20 percent, by count, of the units may possess "minor" and "major" defects: *Provided,* That not more than 10 percent, by count, of the units, may possess "major" defects. One unit in a container is permitted to possess "minor" or "major" defects, if such unit exceeds the respective allowances of 20 percent, or 10 percent, by count: *Provided,* That in all containers comprising the sample such units possessing "minor" and "major" defects do not exceed an average of 20 percent of the total number of units including not more than an average of 10 percent of the total number of units that may possess "major" defects.

(e) (*C*) *classification.* If the canned Kadota figs are fairly free from defects, a score of 21 to 23 points may be given. Canned Kadota figs that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule).

(1) To score in this classification:

(i) In Style I, Whole, not more than 20 percent, by count, of the units may be split (or broken): *Provided,* That not more than 5 percent, by count, of the units may be severed figs. One unit in a container is permitted to be severed if such unit exceeds the 5 percent allowance: *Provided,* That in all containers comprising the sample such units do not exceed an average of 5 percent of the total number of units; or

(ii) In the styles other than Style I, Whole, not more than 10 percent, by count, of the units may be severed figs.

(2) "Fairly free from defects" means that units which possess insignificant, minor, and major defects may be present which do not seriously affect the appearance of the product but that there may be present:

(i) Not more than three tough woody stems and not more than one piece of other harmless extraneous material per 30 oz of total contents; and

(ii) Not more than a total of 40 percent, by count, of the units may possess "minor" and "major" defects: *Provided*, That not more than 20 percent, by count, of the units may possess "major" defects.

(f) (*SStd*) *classification*. Canned Kadota figs that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2833 Character.

(a) *General*. Under the factor of character, consideration is given to the degree of ripeness, the texture and condition of the flesh, the firmness and tenderness of the canned fig, and its tendency to retain its apparent original conformation and size without material disintegration.

(b) (*A*) *classification*. Canned Kadota figs that possess a good character may be given a score of 27 to 30 points. "Good character" means that the canned Kadota figs are well matured and fleshy and have a practically uniform, tender texture; that not more than 5 percent, by count, of the figs may possess a reasonably good character; and none possess a fairly good character.

(c) (*B*) *classification*. If the canned Kadota figs possess a reasonably good character, a score of 24 to 26 points may be given. "Reasonably good character" means that the canned Kadota figs have a reasonably uniform, reasonably tender texture; and that not more than 10 percent, by count, of the figs may possess a fairly good character.

(d) (*C*) *classification*. If the canned Kadota figs possess a fairly good character, a score of 21 to 23 points may be given. Canned Kadota figs that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the canned Kadota figs may be variable in texture from very soft to firm but are not excessively mushy nor excessively firm.

(e) (*SStd*) *classification*. Canned Kadota figs that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2834 Ascertaining the grade of a lot.

The grade of a lot of canned Kadota figs covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.2835 Score sheet.

Size and kind of container
Container mark or identification
Label
Net weight (ounces)
Vacuum (inches)
Drained weight (ounces)
Brix measurement
Sirup designation (extra heavy, heavy, etc.)
Style
Percent split (or broken)
Count (in whole style)

Factors		Score points	
Color	20	(A)	18-20
		(B)	16-17
		(C)	[1] 14-15
		(SStd)	[1] 0-13
Uniformity of size	20	(A)	18-20
		(B)	16-17
		(C)	14-15
		(SStd)	[2] 0-13
Absence of defects	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(SStd)	[1] 0-20
Character	30	(A)	27-30
		(B)	24-26
		(C)	[1] 21-23
		(SStd)	[1] 0-20
Total score	100		

Varietal characteristics: ( ) Similar ( ) Dissimilar
Normal flavor and odor
Grade

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[1] Limiting rule.

[2] Partial limiting rule.

Subpart—United States Standards for Grades of Comb Honey [1]

SOURCE: 32 FR 7565, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION

§ 52.2861 Product description.

The grades in this subpart, as hereinafter outlined, are for the following variations of comb honey:

Comb-section honey.
Shallow-frame comb honey.
Wrapped cut-comb honey.
Chunk or bulk comb honey.

GRADES OF COMB-SECTION HONEY

§ 52.2862 U.S. Fancy comb-section honey.

U.S. Fancy honey shall consist of comb-section honey that meets the following requirements:

(a) The comb shall—

(1) Have no uncapped cells except in the row attached to the wood section;

(2) Be attached to 75 percent of the adjacent area of the wood section if the outside row of cells is empty, or attached to 50 percent if the outside row is filled with honey;

(3) Not project beyond the edge of the wood section;

(4) Not have dry holes;

(5) Have not more than a total of 2½ linear inches of through holes;

(6) Be free from cells of pollen.

(b) The cappings shall—

(1) Be dry and free from weeping and from damage caused by bruising or other means.

(2) Present a uniformly even appearance except in the row attached to the wood section.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for this grade in the official color chart.

(d) The honey shall—

(1) Be uniform in color throughout the comb.

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

(e) The wood section shall—

(1) Be as free from excessive propolis and/or pronounced stains as illustration A in the official color chart.

(2) Be smooth and new in appearance, of white to light buff basswood, and shall not contain knots and/or streaks in excess of the amount shown in illustration B in the color chart.

(f) The minimum net weight shall be 12 ounces, unless otherwise specified.

§ 52.2863 U.S. No. 1 comb-section honey.

U.S. No. 1 honey shall consist of comb-section honey that meets the following requirements:

(a) The comb shall—

(1) Have no uncapped cells except—

(i) In the row attached to the wood section, and/or

(ii) In the row adjoining the outside row, in the corners, and along the lower edge, provided the number does not exceed 15 in a comb section.

(2) Be attached to 50 percent of the adjacent area of the wood section;

(3) Not project beyond the edge of the wood section;

(4) Have no dry holes;

(5) Have not more than a total of 4 linear inches of through holes;

(6) Be free from cells of pollen.

(b) The cappings shall—

(1) Be dry and free from weeping and from damage caused by bruising or other means;

(2) Present a uniformly even appearance except in the row attached to the wood section and except for slight irregularities affecting not to exceed one-half of the comb surface.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for this grade in the official color chart.

(d) The honey shall—

(1) Be fairly uniform in color throughout the comb;

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

(e) The wood section shall—

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[1] This is a reissue (with slight modifications in wording, arrangement, and format) of the U.S. Standards for Grades of Comb Honey Circular No. 24, as revised, of the U.S. Department of Agriculture. That circular, revised Aug. 1933, is out of print.

(1) Be as free from excessive propolis and/or pronounced stains as illustration A in the official color chart;

(2) Be smooth and new in appearance, of white to light buff basswood, and shall not contain knots and/or streaks in excess of the amount shown in illustration B in the color chart.

(f) The minimum net weight shall be 11 ounces, unless otherwise specified.

§ 52.2864 U.S. No. 1 Mixed Color comb-section honey.

When sections of U.S. No. 1 comb-section honey of different colors are packed in the same container, they shall be designated as U.S. No. 1 Mixed Color comb-section honey.

§ 52.2865 U.S. No. 2 comb-section honey.

U.S. No. 2 honey shall consist of comb-section honey that meets the following requirements:

(a) The comb shall—

(1) Have no uncapped cells except—

(i) In the row attached to the wood section, and/or

(ii) In the row adjoining the outside row, in the corners, and along the lower edge; provided the number does not exceed 30 in a comb section;

(iii) Elsewhere in the body of the comb, not more than 5; of the total number of uncapped cells exclusive of those in the outside row, not more than 20 may be empty;

(2) Be attached to 50 percent of the adjacent area of the wood section;

(3) Not project beyond the edge of the wood section;

(4) Have no dry holes larger than three-eighths inch across if more than 1⅜ inches from the wood section;

(5) Have not more than a total of 6 linear inches of through holes;

(6) Be free from serious damage caused by cells of pollen.

(b) The cappings shall—

(1) Not be badly bruised, marred, or leaking (small holes cut in cappings or small broken surfaces permitted);

(2) Have no requirements as to uniformly even appearance.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for this grade in the official color chart.

(d) The honey shall—

(1) Have no requirements as to uniformity in color in any of the comb sections;

(2) Be free from serious damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

(e) The wood section shall—

(1) Be as free from excessive propolis and/or pronounced stains as illustration A in the official color chart;

(2) Be new in appearance, unless otherwise specified.

(f) The minimum net weight shall be 10 ounces, unless otherwise specified.

§ 52.2866 Unclassified comb-section honey.

Unclassified comb-section honey shall consist of comb-section honey that does not conform to the requirements for any of the foregoing grades.

GRADES FOR SHALLOW-FRAME COMB HONEY

§ 52.2867 U.S. Fancy shallow-frame comb honey.

U.S. Fancy honey shall consist of shallow-frame comb honey that meets the following requirements:

(a) The comb shall—

(1) Be produced in shallow frame spaced 1⅜ inches from center to center, which will give a comb thickness of not less than 1 inch, unless otherwise specified;

(2) Be drawn out on foundation which is light in color and is thin enough to produce a comb that compares favorably in texture with the comb in comb-section honey;

(3) Be well built out;

(4) Never have contained brood;

(5) Have no dry holes;

(6) Have no uncapped cells, except as follows—

(i) Empty cells in the row attached to the frame, and/or

(ii) 150 uncapped cells filled with well-ripened honey in the adjoining row;

(7) Be free from cells of pollen.

(b) The cappings shall—

(1) Not be broken or damaged by other means;

(2) Present a uniformly even appearance.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for U.S. Fancy comb-section honey in the official color chart.

(d) The honey shall—

(1) Be uniform in color throughout the combs of the lot, unless otherwise specified;

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

§ 52.2868 U.S. No. 1 shallow-frame comb honey.

U.S. No. 1 honey shall consist of shallow-frame comb honey that meets the following requirements:

(a) The comb shall—

(1) Be produced in shallow frames spaced 1⅜ inches from center to center, which will give a comb thickness of not less than 1 inch, unless otherwise specified;

(2) Be drawn out on foundation which is light in color and is thin enough to produce a comb that compares favorably in texture with the comb in comb-section honey;

(3) Never have contained brood;

(4) Have no uncapped cells, except as follows—

(i) Empty cells in the row attached to the frame and in the adjoining row, and/or

(ii) Additional uncapped filled cells, provided they are confined to groups and in the aggregate do not cover over 10 percent of the comb surface in any frame;

(5) Be free from damage caused by cells of pollen.

(b) The cappings shall—

(1) Be free from serious damage caused by being broken or by other means;

(2) Present a uniformly even appearance except for slight irregularities affecting not to exceed one-half of the comb surface.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for U.S. No. 1 comb-section honey in the official color chart.

(d) The honey shall—

(1) Be fairly uniform in color throughout the comb;

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

§ 52.2869 Unclassified shallow-frame comb honey.

Unclassified shallow-frame comb honey shall consist of shallow-frame comb honey that does not conform to the requirements for either of the foregoing grades.

GRADES FOR WRAPPED CUT-COMB HONEY

§ 52.2870 U.S. Fancy wrapped cut-comb honey.

U.S. Fancy honey shall consist of wrapped cut-comb honey that meets the following requirements:

(a) The comb shall—

(1) Be drawn out on foundation that is light in color and is thin enough to produce a comb that compares favorably in texture with the comb in comb-section honey;

(2) Have no uncapped cells except on the cut edges;

(3) Never have contained brood;

(4) Have no dry holes;

(5) Be free from cells of pollen.

(b) The cappings shall—

(1) Be free from weeping and from damage caused by bruising or other means;

(2) Present a uniformly even appearance.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for U.S. Fancy comb-section honey in the official color chart.

(d) The honey shall—

(1) Be uniform in color throughout the comb;

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor or other means.

(e) The wrapper shall be transparent clean, and sealed in such a manner as to prevent leakage.

(f) The minimum net weight shall be 12 ounces, unless otherwise specified.

§ 52.2871 U.S. No. 1 wrapped cut-comb honey.

U.S. No. 1 honey shall consist of wrapped cut-comb honey that meets the following requirements:

(a) The comb shall—

(1) Be drawn out on foundation that is light in color and is thin enough to produce a comb that compares favorably in texture with the comb in comb-section honey;

(2) Have no uncapped cells, except as follows—

(i) On the cut edges, and/or

(ii) In the row adjoining the cut edge, provided the number does not exceed 15 in a cut comb;

(3) Never have contained brood;

(4) Have no dry holes;

(5) Be free from cells of pollen.

(b) The cappings shall—

(1) Be free from weeping and from damage caused by bruising or other means;

(2) Present a uniformly even appearance except for slight irregularities affecting not to exceed one-half of the comb surface.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for U.S. No. 1 comb-section honey in the official color chart.

(d) The honey shall—

(1) Be fairly uniform in color throughout the comb;

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

(e) The wrapper shall be transparent, clean, and sealed in such a manner as to prevent leakage.

(f) The minimum net weight shall be 11 ounces, unless otherwise specified.

§ 52.2872 Unclassified wrapped cut-comb honey.

Unclassified wrapped cut-comb honey shall consist of cut-comb honey which does not conform to the requirements for either of the foregoing grades.

GRADES FOR CHUNK OR BULK COMB HONEY

§ 52.2873 U.S. Fancy chunk or bulk comb honey—packed in tin.

U.S. Fancy chunk or bulk comb honey packed in tin shall consist of not less than 50 percent by volume of chunk or bulk comb honey, unless otherwise specified, which meets the following requirements:

(a) The comb shall—

(1) Be drawn out on foundation that is light in color and is thin enough to produce a comb that compares favorably in texture with the comb in comb-section honey;

(2) Have not more than one uncapped cell per square inch of comb surface;

(3) Never have contained brood;

(4) Have no dry holes;

(5) Be free from cells of pollen.

(b) The cappings shall—

(1) Be free from damage caused by bruising or other means;

(2) Present a uniformly even appearance.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for U.S. Fancy comb-section honey in the official color chart, except that any amount of watery cappings shall be permitted.

(d) The honey shall—

(1) Be uniform in color throughout the comb and the color of the honey in the comb shall not be darker than the next darker color classification of the extracted honey used to make up the total weight.

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

(e) The total weight shall be made up with U.S. Fancy extracted honey.

(f) The color of the honey within the container shall be designated according to the color of the extracted honey used to make up the total weight.

§ 52.2874 U.S. No. 1 chunk or bulk comb honey—packed in tin.

U.S. No. 1 chunk or bulk comb honey packed in tin shall consist of not less than 50 percent by volume of chunk or bulk comb honey, unless otherwise specified, which meets the following requirements:

(a) The comb shall—

(1) Be drawn out on foundation that is light in color and is thin enough to produce a comb that compares favorably in texture with the comb in comb-section honey;

(2) Have not more than two uncapped cells per square inch of comb surface;

(3) Never have contained brood;

(4) Have no dry holes;

(5) Be free from cells of pollen.

(b) The cappings shall—

(1) Be free from damage caused by bruising or other means;

(2) Present a uniformly even appearance except for slight irregularities affecting not to exceed one-half of the comb surface.

(c) The color of the comb and cappings shall conform to the requirements as illustrated for U.S. No. 1 comb-section honey in the official color chart, except that any amount of watery cappings shall be permitted.

(d) The honey shall—

(1) Be fairly uniform in color throughout the comb and the color of the honey in the comb shall not be darker than the next darker color classification of the extracted honey used to make up the total weight;

(2) Be free from damage caused by granulation, honeydew, poorly ripened or sour honey, objectionable flavor or odor, or other means.

(e) The total weight shall be made up with U.S. Fancy extracted honey.

(f) The color of the honey within the container shall be designated according to the color of the extracted honey used to make up the total weight.

§ 52.2875 Unclassified chunk or bulk comb honey—packed in tin.

"Unclassified" chunk or bulk comb honey packed in tin shall consist of chunk or bulk comb honey that does not conform to the requirements of any of the foregoing grades.

§ 52.2876 U.S. Fancy chunk or bulk comb honey—packed in glass.

"U.S. Fancy" chunk or bulk comb honey packed in glass shall consist of chunk or bulk comb honey that conforms to the requirements for this grade when packed in tin, except that no given volume of chunk or bulk comb honey is required.

§ 52.2877 U.S. No. 1 chunk or bulk comb honey—packed in glass.

"U.S. No. 1" chunk or bulk comb honey packed in glass shall consist of chunk or bulk comb honey that conforms to the requirements for this grade when packed in tin, except that no given volume of chunk or bulk comb honey is required.

§ 52.2878 Unclassified chunk or bulk comb honey—packed in glass.

"Unclassified" chunk or bulk comb honey packed in glass shall consist of chunk or bulk comb honey that does not conform to the requirements of any of the foregoing grades.

TOLERANCES FOR GRADES

§ 52.2879 Application of tolerances.

The tolerances specified for the various grades are placed on a container basis. However, any lot of honey shall be considered as meeting the requirements of a specified grade if no sample from the containers in any lot is found to exceed the tolerances specified by more than double the amount allowed, provided the entire lot shall average within the tolerance specified.

§ 52.2880 Tolerances for comb-section honey.

(a) *U.S. Fancy, U.S. No. 1, and U.S. No. 1 Mixed Color.* (1) In order to allow for variations, other than in weight, incident to proper grading and handling, not more than 5 percent, by count, of the comb sections in any container may be below the requirements for the grade, but not to exceed two-fifths of this tolerance, or 2 percent of the comb sections in any container, shall be allowed for defects causing serious damage.

(2) In addition to the foregoing tolerance, not more than 5 percent, by count, of the comb sections in any container may fail to meet the weight requirements.

(b) *U.S. No. 2.* (1) In order to allow for variations, other than in weight, incident to proper grading and handling, not more than 5 percent, by count, of the comb sections in any container may be below the requirements for the grade.

(2) In addition to the foregoing tolerance, not more than 5 percent, by count, of the comb sections in any container may fail to meet the weight requirements.

§ 52.2881 Tolerances for shallow-frame comb honey.

(a) *U.S. Fancy and U.S. No. 1.* (1) In order to allow for variations, other than in weight, incident to proper grading and handling, not more than 5 percent, by count, of the frames of honey in any container may be below the requirements for the grade, but not to exceed two-fifths of this number, or 2 percent of the frames in any container, shall be allowed for defects causing serious damage.

(2) In addition to the foregoing tolerance, a variation of not more than 5 percent below the net weight marked on the cases shall be permitted.

§ 52.2882 Tolerances for wrapped cut-comb honey.

(a) *U.S. Fancy and U.S. No. 1.* (1) In order to allow for variations, other than in weight, incident to proper grading and handling, not more than 5 percent, by count, of the wrapped cut combs in any container may be below the requirements for the grade, but not to exceed two-fifths of this tolerance, or 2 percent of the wrapped cut combs in any container, shall be allowed for defects causing serious damage.

(2) In addition to the foregoing tolerance, not more than 5 percent, by count, of the wrapped cut combs in any container may fail to meet the weight requirements.

§ 52.2883 Tolerances for chunk or bulk comb honey—packed in tin.

(a) *U.S. Fancy and U.S. No. 1.* In order to allow for variations incident to proper grading and handling, not more than 5 percent, by count, of the containers in any lot may have honey below the requirements for the grade.

§ 52.2884 Tolerances for chunk or bulk comb honey—packed in glass.

(a) *U.S. Fancy and U.S. No. 1.* In order to allow for variations incident to proper grading and handling, not more than 5 percent, by count, of the containers in any lot may have honey below the requirements for the grade.

COLORS, COLOR CLASSIFICATIONS

§ 52.2885 Official USDA colors.

(a) *Official color chart.* The official color chart mentioned throughout this subpart is out of print and no longer available.

(b) *USDA glass color standards.* These color standards replace the "official color chart" which is out of print. Information regarding the USDA glass color standards, and their availability, may be obtained from:

Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

§ 52.2886 Color classifications of comb honey.

(a) Comb-section honey, shallow-frame comb honey, and wrapped cut-comb honey shall be classified as white, light amber, amber, or dark amber.

(b) The foregoing color classification shall be determined in accordance with the color standards as outlined in the applicable U.S. Standards for Grades of Extracted Honey, but the color shall be designated as follows:

(1) Honey classed as water white, extra white, and white for extracted honey shall be designated white comb honey;

(2) Honey classed as extra light amber and light amber shall be designated light amber comb honey;

(3) Honey classed as amber shall be designated amber comb honey;

(4) Honey that is darker than amber shall be designated dark amber comb honey.

(c) In classifying the color of comb honey, a sample of liquid honey shall be drained from a broken comb and the determination made according to the color standards for extracted honey as outlined in the applicable U.S. Standards for Grades of Extracted Honey.

(d) It is permissible to state the color of the honey contained in the comb in conformity with the colors established for the classification of the color of extracted honey.

§ 52.2887 Uniformity of color.

(a) "Uniform in color" means that no pronounced variation in color is apparent in the honey on looking through a comb toward the light.

(b) "Fairly uniform in color" means that honey of a slightly different color from that in the body of the comb section is permitted in the row next to the section and in 10 additional cells, provided these additional cells are well distributed and are in the row adjoining the outside row. In no event shall the contrast of color be greater than that between any color classification and the darker color classification.

DEFINITIONS OF TERMS

§ 52.2888 Definitions of terms.

(a) "Damage" means any injury or defect that materially affects the appearance, edibility, or shipping quality of the honey, such as:

(1) The presence of any cells, of pollen in more than one-third of the combs in any lot of U.S. No. 1 shallow-frame comb honey. One-third of the combs may have not more than 50 cells of pollen in a comb, provided they are not widely scattered but are on the outside edges of the comb.

(2) The presence in comb-section honey, shallow-frame comb honey, wrapped cut-comb honey, or chunk or bulk comb honey packed in tin or glass, of more than 10 percent by volume of granulated honey in the uncapped cells, or of more than very small or scattered granules in the capped cells.

(3) The presence of any spots of feces (bee excrement) on the comb.

(b) "Serious damage" means any injury or defect that seriously affects the edibility or shipping quality of the honey Any spots of feces on the surface of the comb or, in sections, attachment of comb to less than 45 percent of the adjacent area shall be considered serious damage.

(c) "Uncapped cells" or cells, either empty or filled with honey, which are not sealed or capped over by the bees.

(d) "Adjacent area of the section" means the total length of the four inner sides of the section, multiplied by the thickness of the comb; as, for instance, in the case of a section 4¼ inches square, 4+4+4+4 equals 16, which, multiplied by the actual thickness of the comb, which might be 1¼ inches, gives an adjacent area of 20 square inches.

(e) "Project beyond the edge of the section" refers to the projection of comb beyond the widest part of the section, generally because no separators were used, and does not refer to the occasional slight projection of wax beyond the narrow or beeway part of the section. Projection at this point to such an extent that honey leaks down over the face of the comb is not permitted.

(f) "Dry holes" are holes in the honeycomb larger than a cell, and not next to the wood; they may extend partly or entirely through the comb.

(g) "Through holes" are holes or passages through the comb from one side of the comb to the other, between the edge of the comb and the section.

(h) "Weeping" is the exudation or seepage of honey through the cappings, forming small drops which finally run down the face of the comb. It is usually caused by absorption of moisture from the atmosphere by the honey.

(i) "Bruising" is any injury by accident or pressure, such as an indentation of the surface of the comb by pressure of fingers. Bruising is considered to be damage if it is sufficient to cause leaking.

(j) "Uniformly even appearance" means that the surface of the combs shall be free from irregularities other than those incident to the work of the bees in completing a comb of uniform construction.

(k) "Slight irregularities" means irregularities of not more than one-eighth inch above or below the general surface of the comb, but not projecting beyond the edge of the section. The slight ridging of comb surface sometimes incidental to the use of fence separators is not to be considered an irregularity.

(l) "Freedom from excessive propolis and/or pronounced stains" means that the top of the wood section shall bear no greater stain from propolis than that ordinarily found on a paraffined section, and that the other three sides and the edges and inner faces and angles of the wood sections shall be reasonably free from propolis. Permissible stain is shown in the color chart.[3]

(m) "New in appearance" means not discolored by age or exposure. Paraffined sections usually appear new, even though they may be left over from a previous season.

(n) "Well built out," as used in reference to shallow-frame comb honey, means that the combs are fairly uniform in thickness throughout each comb and throughout the lot.

Subpart—United States Standards for Grades of Frozen Plums

SOURCE: 21 FR 781, Feb. 4, 1956, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, COLOR TYPES, STYLES, AND GRADES

§ 52.2911 Product description.

Frozen plums means the frozen product prepared from clean, sound, fresh fruit of any commercial variety of plums, exclusive of Damson variety, which are sorted, washed, drained, and pitted; which may be packed with or without the addition of a nutritive sweetening ingredient; and which are frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.2912 Color types of frozen plums.

(a) Purple or Blue (such as Italian Prune plum variety).

(b) Red (such as Satsuma variety or Santa Rosa variety).

(c) Yellow-Green (such as Yellow Egg variety, Jefferson variety and Reine Claude variety).

§ 52.2913 Styles of frozen plums.

(a) "Halved" means frozen plums that have been prepared by cutting whole plums longitudinally into approximate halves.

(b) "Whole pitted" means frozen plums that have been prepared from whole plums in a manner that the plums are not excessively crushed or excessively broke in removing the pits.

(c) "Crushed and broken" means frozen plums that have been prepared from whole plums in a manner that most of the plums are crushed or broken in removing the pits.

§ 52.2914 Grades of frozen plums.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen plums that possess similar varietal characteristics; that possess a normal flavor; that possess a good color; that are practically uniform in size for the applicable styles; that are practically free from defects; that possess a good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart, the total score is not less than 85 points: *Provided*, That frozen plums may be only reasonably uniform in size for the applicable styles, if the total score is not less than 85 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen plums that possess similar varietal characteristics; that possess a normal flavor; that possess a reasonably good color; that are reasonably uniform in size for the applicable styles; that are reasonably free from defects; that possess a reasonably good character; and that for those factors which are scored in accordance with the scoring system outlined in this subpart, the total score is not less than 70 points: *Provided*, That the frozen plums may vary in size if the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen plums that fail to meet the requirements of U.S. Grade B or U.S. Choice.

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[3] See § 52.2885.

FACTORS OF QUALITY

§ 52.2915 Ascertaining the grade.

(a) *General.* The grade of frozen plums is determined immediately after thawing to the extent that the units may be separated easily and are free from ice crystals. In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(1) *Factors not rated by score points.*
(i) Varietal characteristics.
(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Size	10
Defects	30
Character	40
Total score	100

(b) *Normal flavor.* "Normal flavor" means that the product has a normal, characteristic flavor and odor for the varietal type and is free from objectionable flavors and objectionable odors of any kind.

§ 52.2916 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.2917 Color.

(a) (*A*) *classification.* Frozen plums that possess a good color may be given a score of 17 to 20 points. "Good color" means that the frozen plums, internally and externally, possess a practically uniform, bright, typical color of well ripened, properly prepared, and properly processed frozen plums of similar varietal characteristics and that the frozen plums are practically free from any brown color due to oxidation, improper processing, or other causes, which color may affect no more than slightly the appearance or edibility of the product.

(b) (*B*) *classification.* Frozen plums that possess a reasonably good color may be given a score of 14 to 16 points. Frozen plums that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the frozen plums, internally and externally, possess a reasonably uniform, reasonably bright, typical color of reasonably well ripened, properly prepared, and properly processed frozen plums of similar varietal characteristics and that the frozen plums are reasonably free from any brown color due to oxidation, improper processing, or other causes, which color may not materially affect the appearance or edibility of the product.

(c) (*SStd.*) *classification.* Frozen plums that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2918 Size.

(a) *General.* The factor of uniformity of size for crushed and broken frozen plums is not based on any detailed requirements and is not scored; the other three factors (color, defects, and character, as applicable) are scored and the total is multiplied by 100 and divided by 90, dropping any fractions to determine the total score.

(b) (*A*) *classification.* Halved or whole pitted styles of frozen plums that are practically uniform in size may be given a score of 9 or 10 points. "Practically uniform in size" in halved or whole pitted styles means that in 90 percent, by count, of the units which have the most uniform size, the weight of the largest unit does not exceed the weight of the smallest unit by more than 50 percent.

(c) (*B*) *classification.* Halved or whole pitted styles of frozen plums that are reasonably uniform in size may be given a score of 7 or 8 points. "Reasonably uniform in size" in halved or whole pitted styles means that in 90 percent, by count, of the units which have the most uniform size, the weight of the largest unit is not more than twice the weight of the smallest unit.

(d) (*SStd.*) *classification.* Halved or whole pitted styles of frozen plums that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 6 points and shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a partial limiting rule).

§ 52.2919 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous matter; units that are crushed or broken with respect to halved and whole pitted styles; pit material; blemished and seriously blemished units; and any other defects which detract from the appearance and eating quality of the product.

(1) "Harmless extraneous matter" means any vegetable substance (including, but not limited to, a leaf, stem, or portions thereof) that is harmless.

(2) "Crushed or broken unit" means a unit in halved or whole pitted styles that is torn, ragged, or otherwise mutilated to the extent that the unit does not retain its normal shape. In halved style, halves of plums that are slightly split are not considered crushed or broken. In whole pitted style, plums that are slit or perforated by the pitting operation are not considered crushed or broken unless the unit is ragged or otherwise mutilated to the extent that the appearance of the unit does not have the approximate shape of a whole pitted plum.

(3) "Pit material" means any whole pit or any piece of pit material regardless of size.

(4) "Blemished" means blemished by sunburn, scab, or blemished by discoloration or by other means to the extent that the appearance and eating quality of the unit is materially affected.

(5) "Seriously blemished" means blemished by sunburn, scab, or blemished by discoloration or by other means to the extent that the appearance and eating quality of the unit is seriously affected.

(6) "Other defects" means growth cracks, doubles, or other abnormalities which materially affect the appearance or eating quality of the unit (shriveled areas are not considered defects).

(b) (*A*) *classification.* Frozen plums that are practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means that the product is practically free from pit material and that, individually and collectively, harmless extraneous matter; crushed and broken units with respect to halved and whole pitted styles; blemished and seriously blemished units; and other defects do not materially affect the appearance and eating quality of the product; and that there may be present:

(1) Not more than 5 percent, by weight, of crushed or broken units in halved and whole pitted styles;

(2) Not more than 10 percent, by weight, of blemished and seriously blemished units: *Provided,* That not more than 5 percent, by weight, of all the units may be seriously blemished.

(c) (*B*) *classification.* Frozen plums that are reasonably free from defects may be given a score of 21 to 24 points. Frozen plums that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the product is practically free from pit material and that, individually and collectively, harmless extraneous matter; crushed and broken units with respect to halved and whole pitted styles; blemished and seriously blemished units; and other defects do not seriously affect the appearance and eating quality of the product; and that there may be present:

(1) Not more than 10 percent, by weight, of crushed or broken units in halved and whole pitted styles;

(2) Not more than 20 percent, by weight, of blemished and seriously blemished units: *Provided,* That not

best copy available

more than 10 percent, by weight, of all the units may be seriously blemished.

(d) (*SStd.*) *classification.* Frozen plums that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2920 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture and tenderness of the frozen plums, and to shriveled areas of skin.

(b) (*A*) *classification.* Frozen plums that possess a good character may be given a score of 34 to 40 points. "Good character" means that the units possess a tender, fleshy texture, typical of well ripened, properly processed frozen plums; and that not more than 15 percent, by weight, of the units may possess a reasonably good character or possess shriveled areas that materially affect the appearance of the unit.

(c) (*B*) *classification.* Frozen plums that possess a reasonably good character may be given a score of 28 to 33 points. Frozen plums that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the units possess the texture of reasonably well ripened frozen plums that are properly processed; the texture is reasonably fleshy and the units reasonably tender, or the tenderness may be variable from slightly soft to slightly firm; and that not more than 30 percent, by weight, of the units may fail to meet at least a reasonably good character or possess shriveled areas that materially affect the appearance of the unit.

(d) (*SStd.*) *classification.* Frozen plums that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.2921 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2922 Score sheet for frozen plums.

Number, size, and kind of container ....
Label, style of pack, fruit-sugar ratio (if shown) ....
Container mark or identification ....
Net weight (ounces) ....
Type ....
Style ....
Count ....

Factors		Score Points	
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Size	10	(A)	9-10
		(B)	7-8
		(SStd.)	[2] 0-6
Defects	30	(A)	25-30
		(B)	[1] 21-24
		(SStd.)	[1] 0-20
Character	40	(A)	34-40
		(B)	[1] 28-33
		(SStd.)	[1] 0-27
Total score	100		

Normal flavor ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Concentrated Tangerine Juice for Manufacturing

SOURCE: 20 FR 7281, Sept. 30, 1955, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.2931 Product description.

Concentrated tangerine juice for manufacturing is the concentrated product obtained from sound, mature fruit of the Mandarin group (Citrus reticulata). The fruit is prepared by sorting and by washing prior to extraction of the juice and the extracted juice is concentrated. The concentrated tangerine juice is processed in accordance with good commercial practice; and may or may not require processing by heat or subsequent refrigeration to assure preservation of the product. The finished product does not contain any additives except that cold-pressed oil to standardize flavor and chemical preservatives permissible under provisions of the Federal Food, Drug, and Cosmetic Act may have been added.

(a) The Brix value of the finished concentrate shall comply with the following for the dilution factors indicated:

Dilution factor	Brix value of the finished concentrate (degrees)	
	Minimum Brix value	Maximum Brix value
1 plus 3	38.0	41.0
1 plus 4	46.0	49.0
1 plus 5	53.3	56.3
1 plus 6	60.3	63.3

(b) Concentrated tangerine juice for manufacturing of other dilution factors than "1 plus 3" to "1 plus 6", as indicated in paragraph (a) of this section, shall result in a Brix (upon reconstitution as prescribed by the processor or as prescribed by the label on the container, if labeled) of not less than 10.6 degrees.

§ 52.2932 Grades of concentrated tangerine juice for manufacturing.

(a) "U.S. Grade A for Manufacturing" or "U.S. Fancy for Manufacturing" is the quality of concentrated tangerine juice which shows no material gelation, reconstitutes properly, and of which the reconstituted juice possesses a good color; is practically free from defects; possesses a reasonably good flavor; and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C for Manufacturing" or "U.S. Standard for Manufacturing" is the quality of concentrated tangerine juice which shows no material gelation, reconstitutes properly, and of which the reconstituted juice possesses a fairly good color; is fairly free from defects; possesses a fairly good flavor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard for Manufacturing" is the quality of concentrated tangerine juice that fails to meet the requirements of U.S. Grade C for Manufacturing or U.S. Standard for Manufacturing.

FILL OF CONTAINER

§ 52.2933 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled with concentrated tangerine juice as full as practicable without impairment of quality.

FACTORS OF QUALITY

§ 52.2934 Ascertaining the grade.

(a) *General.* The grade of concentrated tangerine juice for manufacturing is ascertained by examining the concentrate and the reconstituted juice; and in addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Degree of gelation.

(ii) Faculty of reconstituting properly.

(2) *Factors rated by score points* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Defects	20
Flavor	40
Total score	100

§ 52.2935 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, or 20 points.)

§ 52.2936 Color.

(a) (*A-Mfg*) *classification.* Concentrated tangerine juice of which the reconstituted juice possesses a good color may be given a score of 34 to 40 points "Good color" means that the color is a reasonably bright yellow to yellow-orange color typical of properly processed and properly concentrated tangerine juice and is practically free from browning due to scorching, oxidation, caramelization, or other causes.

(b) (*C-Mfg*) *classification.* If the reconstituted juice possesses a fairly good color, a score of 28 to 33 points may be given. Concentrated tangerine juice that falls into this classification shall not be graded above U.S. Grade C for Manufacturing or U.S. Standard for Manufacturing, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the tangerine juice may possess a typical fairly bright yellow to yellow-orange color that is reasonably free from browning due to scorching, oxidation, caramelization, or other causes.

(c) (*SStd-Mfg*) *classification.* Concentrated tangerine juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard for Manufacturing, regardless of the total score for the product (this is a limiting rule).

§ 52.2937 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from seeds and portions thereof, from excessive juice cells, from pulp, and from other defects.

(1) "Pulp" means particles of membrane, core, and peel.

(b) (*A-Mfg*) *classification.* Concentrated tangerine juice of which the reconstituted juice is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that there may be present:

(1) Small seeds or portions thereof that are of such size that they could pass through round perforations not exceeding ⅛ inch in diameter, provided such seeds or portions thereof do not materially affect the appearance or edibility of the product.

(2) Juice cells and pulp that do not materially affect the appearance or edibility of the product; and

(3) Other defects that are not more than slightly objectionable.

(c) (*C-Mfg*) *classification.* If the reconstituted juice is fairly free from defects a score of 14 to 16 points may be given. Concentrated tangerine juice that falls into this classification shall not be graded above U.S. Grade C for manufacturing or U.S. Standard for Manufacturing, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that there may be present:

(1) Small seeds or portions thereof that are of such size that they could pass through round perforations not exceeding ⅛ inch in diameter, provided such seeds or portions thereof do not seriously affect the appearance or edibility of the product;

(2) Juice cells and pulp that do not seriously affect the appearance or edibility of the product; and

(3) Other defects that are not materially objectionable.

(d) (*SStd.-Mfg*) *classification.* Concentrated tangerine juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard for Manufacturing regardless of the total score for the product (this is a limiting rule).

§ 52.2938 Flavor.

(a) (*A-Mfg*) *classification.* Concentrated tangerine juice of which the reconstituted juice possesses a reasonably good flavor may be give a score of 34 to 40 points. "Reasonably good flavor" means that the flavor is typical of reconstituted concentrated tangerine juice from properly processed and concentrated tangerine juice; that the flavor may range from high acidity to low acidity; is practically free from traces of scorching, caramelization, oxidation, or terpene; and is free from off-flavors of any kind. To score in this classification the ratio of the Brix value to acid shall be not less than 9 to 1 nor more than 18 to 1.

(b) *(C-Mfg) classification.* If the reconstituted juice possesses a fairly good flavor, a score of 28 to 33 points may be given. Concentrated tangerine juice that falls into this classification shall not be graded above U.S. Grade C for Manufacturing or U.S. Standard for Manufacturing, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means a normal flavor for reconstituted concentrated tangerine juice; and that the flavor may range from high acidity to low acidity, may have a slightly caramelized or slightly oxidized flavor or may possess traces of terpene but is free from off-flavors of any kind. To score in this classification the ratio of the Brix value to acid shall be not less than 9 to 1 nor more than 21 to 1.

(c) *(SStd-Mfg) classification.* If the concentrated tangerine juice fails to meet the requirements of paragraph (b) of this section, a score of 0 to 27 points may be given. Concentrated tangerine juice that falls into this classification shall not be graded above Substandard for Manufacturing, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.2939 Explanation of terms and analyses.

(a) "Reconstituted juice" means the product obtained by mixing thoroughly one part by volume of the concentrated tangerine juice with a stated volume of water. For example, a dilution factor of "1 plus 6" means that to one part by volume of concentrated tangerine juice 6 parts by volume of water are added to produce a reconstituted juice. In the absence of any declared dilution factor the product is diluted with water to a Brix of between 10.6 and 11.6 degrees. Distilled water is used in reconstituting the product for testing flavor.

(b) "Reconstitutes properly" means that the concentrate mixes readily into a tangerine juice which shows no graininess and that the reconstituted juice shows no material separation of colloidal or suspended matter after standing four hours at a temperature of not less than 68 degrees Fahrenheit in a clear glass tube or cylinder of approximately 250 millimeter capacity and approximately 1¼ inches in diameter.

(c) "Acid" means the percent by weight of acid (calculated as anhydrous citric acid) in concentrated tangerine juice and is determined by titration with standard sodium hydroxide solution using phenolphthalein as indicator.

(d) "Brix value" of the concentrate is the refractometric sucrose value determined in accordance with the International Scale of Refractive Indices of Sucrose Solutions and to which the applicable correction for acid is added. (See table I for corrections.)

(e) The "Brix" of reconstituted juice means the degree Brix as determined by a Brix hydrometer calibrated at 20 degrees Centigrade (68° Fahrenheit), and to which any applicable temperature correction has been applied.

TABLE I.—CORRECTIONS FOR OBTAINING BRIX VALUE

Citric acid, anhydrous (percent by weight)	Correction to be added to refractometer sucrose value to obtain degree Brix value
2.0	0.39
2.2	.43
2.4	.47
2.6	.51
2.8	.54
3.0	.58
3.2	.62
3.4	.66
3.6	.70
3.8	.74
4.0	.78
4.2	.81
4.4	.85
4.6	.89
4.8	.93

TABLE I.—CORRECTIONS FOR OBTAINING BRIX VALUE—Continued

Citric acid, anhydrous (percent by weight)	Correction to be added to refractometer sucrose value to obtain degree Brix value
5.0	.97

LOT INSPECTION AND CERTIFICATION

§ 52.2940 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2941 Score sheet for concentrated tangerine juice for manufacturing.

Size and kind of container ....

Container mark or identification ....

Label (including reconstitution factor) ....

Liquid measure (fluid ounces) ....

Net weight ....

Brix value of concentrate (corrected for acid) ....

Anhydrous citric acid in concentrate (percent by weight) ....

Brix value to acid ratio ....

Recoverable oil (ml./100 grams) ....

Reconstitutes properly: (Yes) (No) ....

Factors		Score points	
Color	40	(A-Mfg)	34-40
		(C-Mfg)	[1] 28-33
		(SStd-Mfg)	[1] 0-27
Defects	20	(A-Mfg)	17-20
		(C-Mfg)	[1] 14-16
		(SStd-Mfg)	[1] 0-13
Flavor	40	(A-Mfg)	34-40
		(C-Mfg)	[1] 28-33
		(SStd-Mfg)	[1] 0-27
Total score	100		

Grade for manufacturing ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Sauerkraut[1]

SOURCE: 22 FR 2334, Apr. 9, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.2951 Product description.

Canned (or packaged) sauerkraut hereinafter referred to as canned kraut, is prepared from clean, sound, well matured heads of the cabbage plant (Brassica oleracea var. capitata L.) which have been properly trimmed and cut; to which salt is added and which is cured by natural fermentation. The product may or may not be packed with pickled peppers, pimientos, tomatoes, or contain other flavoring ingredients to give the product specific flavor characteristics. The product (a) may be canned by processing sufficiently by heat to assure preservation in hermetically sealed containers; or (b) may be packaged in sealed containers and preserved with or without the addition of benzoate of soda or any other ingredient permissible under the provisions of the Federal Food, Drug, and Cosmetic Act or applicable State laws or regulations.

[28 FR 3573, Apr. 12, 1963. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2952 Styles of canned kraut.

(a) "Shredded" means canned kraut which has been prepared from cabbage cut into shreds.

(b) "Chopped" means canned kraut which has been prepared from cabbage that is cut or chopped into small pieces.

§ 52.2953 Grades of canned kraut.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned kraut that possesses a good color; that is well cut; that is practically free from defects;

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[1] The standards of this subpart also cover packaged sauerkraut which has not been heat-processed in hermetically sealed containers.

that possess a good character; that possesses a good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided,* That the canned kraut may possess a reasonably good color, scoring not less than 25 points, may be reasonably well cut, may possess a reasonably good character, and may be reasonably free from minor defects, if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of canned kraut that possesses a reasonably good color; that is reasonably well cut; that is reasonably free from defects; that possesses a reasonably good character; that possesses a reasonably good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided,* That the canned kraut may be fairly well cut, if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned kraut that possesses a fairly good color; that is fairly well cut; that is fairly free from defects; that possesses a fairly good character; that possesses a fairly good flavor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(d) "Substandard" is the quality of canned kraut that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.2954 Recommended fill of container.

The fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned kraut be filled as full as practicable with the kraut and that the kraut and packing medium shall fill the container to not less than 95 percent of its total capacity.

§ 52.2955 Recommended minimum drained weight.

The minimum drained weight recommendations in Table No. 1 of this subpart are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned kraut is determined by emptying the contents of the container upon a United States Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve to facilitate drainage, and allow to drain for two minutes. The drained weight of kraut is the weight of the sieve and the drained kraut less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2½ size can (401 × 411) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

TABLE 1—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED KRAUT

Container size or designation	Overall dimensions (inches)		Minimum drained weight (Avdp. ounces)
	Diam.	Height	
Metal containers:			
8 Z tall	2 11/16	3 4/16	6.7
No. 1 picnic	2 11/16	4	8.5
No. 300	3	4 7/16	12.0
No. 1 tall	3 1/16	4 11/16	13.0
No. 303	3 3/16	4 6/16	13.2
No. 95	3 7/16	4	14.0
No. 2	3 7/16	4 9/16	16.0
No. 2½	4 1/16	4 11/16	23.0
No. 10	6 3/16	7	80.0
	Water capacity (fluid ounces)		
Glass containers:			
8 ounce jar	8.1	5.5	
Pint jar	16.5	11.2	
No. 303 jar	17.0	11.6	
½ pint jar	24.5	16.7	
Quart jar	32.6	22.2	
Containers (other than metal) not listed above		1([1])	

[1] Not less than 68 percent of the water capacity (fluid ounce measure at 68° F.) of the container.

[22 FR 2334, Apr. 9, 1957, as amended at 28 FR 3573, Apr. 12, 1963; 28 FR 3713, Apr. 17,

1963. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.2956 Compliance with recommended minimum drained weights.

Compliance with the recommended minimum drained weights for canned kraut is determined by averaging the drained weights of all containers which are representative of a specific lot. Such lot is considered as meeting recommendations, if:

(a) At least one-half of the containers meets the recommended minimum drained weight;

(b) The drained weights of the containers which do not meet the recommended minimum drained weight are within the range of variability of good commercial practice; and

(c) The average drained weight of all the containers which are representative of the lot does not fall below recommended minimum drained weight.

FACTORS OF QUALITY

§ 52.2957 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	30
Cut	10
Defects	20
Character	10
Flavor	30
Total score	100

§ 52.2958 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.2959 Color.

(a) *General.* The color of canned kraut has reference to the predominating and characteristic appearance of the shreds or pieces and to the brightness of the product.

(1) Kraut model No. 1 and kraut model No. 2 means the U.S.D.A. kraut models illustrating the color of canned kraut referred to in this section.

(2) Information regarding kraut model No. 1 and kraut model No. 2 may be obtained by writing to the Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, U.S. Department of Agriculture Washington, D.C., 20250.

(b) (*A*) *classification.* Canned kraut that possesses a good color may be given a score of 27 to 30 points. "Good color" means that the canned kraut possesses a bright, practically uniform, typical white to light cream general appearance characteristic of properly prepared and properly processed canned kraut equal to or better than kraut model No. 1.

(c) (*B*) *classification.* If the canned kraut possesses a reasonably good color a score of 24 to 26 points may be given. Canned kraut that scores less than 25 points in this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule). "Reasonably good color" means that the canned kraut possesses a reasonably bright, reasonably uniform, typical cream to light straw general appearance characteristic of properly prepared and properly processed canned kraut equal to or better than kraut model No. 2.

(d) (*C*) *classification.* Canned kraut that possesses a fairly good color may be given a score of 21 to 23 points. Canned kraut that scores in this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned kraut may possess a dark straw, slightly green, or yellowish general appearance and may be dull or slightly variable but is not off color.

(e) (*SStd.*) *classification.* Canned kraut that fails to meet the requirements of paragraph (d) of this section or is definitely dark or has a pink tint or is off color for any reason may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2960 Cut.

(a) *General.* The factor of cut has reference to uniformity of the shreds and of the chopped pieces in canned kraut and to the length of the shreds in shredded kraut.

(b) (*A*) *classification.* Canned kraut that is well cut may be given a score of 9 or 10 points. "Well cut" means with respect to shredded kraut that the shreds are uniform in thickness and that the appearance of the product is not more than slightly affected by the presence of short or irregular cut pieces, and with respect to chopped kraut that the pieces are uniform in size and that the presence of pieces markedly smaller or larger than the predominant size of pieces does not more than slightly affect the appearance of the product.

(c) (*B*) *classification.* If the canned kraut is reasonably well cut, a score of 8 points may be given. "Reasonably well cut" means with respect to shredded kraut that the shreds are reasonably uniform in thickness and that the appearance of the product is not materially affected by the presence of short or irregular cut pieces, and with respect to chopped kraut that the pieces are reasonably uniform in size and that the presence of pieces markedly smaller or larger than the predominant size of pieces does not materially affect the appearance of the product.

(d) (*C*) *classification.* Canned kraut that is fairly well cut may be given a score of 7 points. Canned kraut that scores in this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule). "Fairly well cut" means with respect to shredded kraut that the presence of very short or very fine pieces or large and irregular pieces, and with respect to chopped kraut that the presence of very fine pieces or large and irregular pieces does not seriously affect the appearance of the product.

(e) (*SStd.*) *classification.* Canned kraut that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2961 Defects.

(a) *General.* Defects refers to the degree of freedom from coarse pieces of leaves, large and coarse pieces of core material, and blemished, spotted, or otherwise dark or discolored shreds or pieces in canned kraut.

(1) "Minor defects" means large or coarse pieces of leaves and large or coarse pieces of core material in canned kraut.

(2) "Major defects" means blemished, spotted, or otherwise discolored shreds or pieces of leaves or core material in canned kraut.

(b) (*A*) *classification.* Canned kraut that is practically free from defects may be given a score of 18 to 20 points "Practically free from defects" means that minor defects may be present that do not materially affect the appearance or eating quality and that major defects may be present that do not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* If the canned kraut is reasonably free from defects, a score of 16 or 17 points may be given. Canned kraut that falls into this classification on account of the presence of major defects shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule). "Reasonably free from defects" means that minor and major defects may be present that do not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* Canned kraut that is fairly free from defects may be given a score of 14 or 15 points.

Canned kraut that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that minor and major defects may be present that do not seriously affect the appearance or eating quality of the product.

(e) (*SStd.*) *classification.* Canned kraut that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2962 Character.

(a) *General.* Character refers to the condition of the product and the tendency of kraut to be firm and easy to cut.

(b) (*A*) *classification.* Canned kraut that possesses a good character may be given a score of 9 or 10 points. "Good character" means that the kraut is crisp and firm.

(c) (*B*) *classification.* If the canned kraut possesses a reasonably good character, a score of 8 points may be given. "Reasonably good character" means that the kraut is reasonably crisp and reasonably firm.

(d) (*C*) *classification.* Canned kraut that possesses a fairly good character may be given a score of 7 points. Canned kraut that scores in this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the kraut may lack crispness, may be soft or slightly tough, but is not excessively tough or excessively soft or mushy.

(e) (*SStd.*) *classification.* Canned kraut that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.2963 Flavor.

(a) *General.* The flavor of kraut depends on a typical lactic acid fermentation of the product which is controlled, in part, by the amount of salt present. Kraut of any grade above substandard shall test within the following limits:

Acidity (calculated as lactic acid)	1.0% minimum.
Salt	1.3% minimum. 2.5% maximum.

(b) (*A*) *classification.* Canned kraut that possesses a good flavor may be given a score of 27 to 30 points. "Good flavor" means that the product possesses a good characteristic kraut flavor which is free from off flavors and off odors of any kind.

(c) (*B*) *classification.* If the canned kraut possesses a reasonably good flavor, a score of 24 to 26 points may be given. Canned kraut that falls into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor" means that the product possesses a reasonably good characteristic kraut flavor which is free from off flavors and off odors of any kind.

(d) (*C*) *classification.* Canned kraut that possesses a fairly good flavor may be given a score of 21 to 23 points. Canned kraut that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means that the product possesses a fairly good kraut flavor which is free from objectionable flavors and objectionable odors which may seriously affect the eating quality of the product.

(e) (*SStd.*) *classification.* Canned kraut that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[22 FR 2334, Apr. 9, 1957, as amended at 28 FR 3573, Apr. 12, 1963. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

DEFINITIONS; METHODS OF ANALYSES

§ 52.2964 Definitions of terms and methods of analyses.

(a) "Salt" means percent, by weight, of salt (NaCl) in canned kraut. The percent salt in canned kraut may be determined by direct titration on a 10-gram sample of the packing media, after neutralization with a solution of sodium hydroxide or by adding an excess of calcium carbonate. Dilute with about 25 milliliters of distilled water and titrate with N/10 silver nitrate ($AgNO_3$) solution, using 0.5 milliliter of potassium chromate indicator, to the characteristic yellow-orange end point.

(b) "Acidity" means percent, by weight, of acid, calculated as lactic, in canned kraut. The percent acidity may be determined by direct titration on a 10-gram sample of the packing media. Dilute with about 25 milliliters of distilled water and titrate with N/10 sodium hydroxide solution, using several drops of phenolphthalein indicator, to the characteristic permanent faint-pink end point.

(c) "Methods of Analyses." The analyses indicated in this section shall be made in accordance with methods of analyses specified in "Official Methods of Analysis of the Association of Official Agricultural Chemists" or by any other method which gives equivalent results.

LOT INSPECTION AND CERTIFICATION

§ 52.2965 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.2966 Score sheet for canned sauerkraut.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Style ....
Acidity, percent (as lactic) ....
Salt, percent (NaCl) ....

Factors		Score points	
I. Color	30	(A)	27-30
		(B)	[2] 24-26
		(C)	[1] 21-23
		(SStd.)	[1] 0-20
II. Cut	10	(A)	9-10
		(B)	8
		(C)	[2] 7
		(SStd.)	[1] 0-6
III. Defects	20	(A)	18-20
		(B)	[2] 16-17
		(C)	[1] 14-15
		(SStd.)	[1] 0-13
IV. Character	10	(A)	9-10
		(B)	8
		(C)	[1] 7
		(SStd.)	[1] 0-6
V. Flavor	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(SStd.)	[1] 0-20
Total score	100		

Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Frozen Sweet Peppers

SOURCE: 21 FR 6857, Sept. 11, 1956, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.3001 Product description.

"Frozen sweet peppers" is the frozen product prepared from fresh, clean, sound, firm pods of the common commercial varieties of sweet peppers, which have been properly prepared, may or may not be blanched and are then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.3002 Types of frozen sweet peppers.

(a) Type I, green.

(b) Type II, red.

(c) Type III, mixed (green and red).

§ 52.3003 Styles of frozen sweet peppers.

(a) "Whole stemmed" means whole unpeeled pepper pods with stem and core removed.

(b) "Whole unstemmed" means whole unpeeled pepper pods with stems trimmed to not more than ⅓ inch length.

(c) "Halved" means whole stemmed, unpeeled, pepper pods which have been cut approximately in half from stem to blossom end.

(d) "Sliced" means whole stemmed, unpeeled pepper pods or pieces of pepper pods which have been cut into strips.

(e) "Diced" means whole stemmed, unpeeled pepper pods or pieces of pepper pods which have been cut into approximate square pieces measuring ½ inch or less.

(f) "Unit" means a whole unpeeled pepper pod or portion of a pepper pod in frozen sweet peppers.

§ 52.3004 Grades of frozen sweet peppers.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen sweet peppers that possess similar varietal characteristics; that possess a normal flavor; that possess a good color; that are practically uniform in size and symmetry; that are practically free from defects; that possess a good character; and for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points: *Provided*, That the frozen sweet peppers may be reasonably uniform in size and symmetry if the total score is not less than 85 points.

(b) "U.S. Grade B" or "U.S. Extra Standard" is the quality of frozen sweet peppers that possess similar varietal characteristics; that possess a normal flavor; that possess a reasonably good color; that are reasonably uniform in size and symmetry; that are reasonably free from defects; that possess a reasonably good character; and for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided*, That the frozen sweet peppers may be variable in size and symmetry if the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen sweet peppers that fail to meet the requirements of U.S. Grade B or U.S. Extra Standard.

FACTORS OF QUALITY

§ 52.3005 Ascertaining the grade.

(a) *General*. In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points*.

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points*. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size and symmetry	20
Defects	30
Character	30
Total score	100

The evaluation of the factors of quality are made immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units.

(b) *Normal flavor*. "Normal flavor" means that the product is free from objectionable flavor and objectionable odors of any kind.

§ 52.3006 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "27 to 30 points" means 27, 28, 29, or 30 points.)

§ 52.3007 Color.

(a) *General.* The color of frozen sweet peppers has reference to the predominating and characteristic color of the exterior surface of the units of frozen sweet peppers.

(b) *(A) classification.* Frozen sweet peppers that possess a good color may be given a score of 17 to 20 points. "Good color" means a good characteristic bright color for the type and with respect to type I and type II variations in color do not materially affect the appearance of the product.

(c) *(B) classification.* Frozen sweet peppers that possess a reasonably good color may be given a score of 14 to 16 points. Frozen sweet peppers that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means a reasonably bright characteristic color for the type and with respect to Type I and Type II variations in color do not seriously affect the appearance of the product.

NOTE: When the appearance of the product is seriously affected by a mixture of Type I and Type II units consider as Type III.

(d) *(SStd.) classification.* Frozen sweet peppers that fail to meet the requirements of paragraph (c) of this section or are definitely dull or off color for any reason may be given a score of 0 to 13 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.3008 Uniformity of size and symmetry.

(a) *General.* Uniformity of size and symmetry refers to the degree of variation in size and symmetry of the units in the respective styles of frozen sweet peppers.

(b) *(A) classification.* Frozen sweet peppers that are practically uniform in size and symmetry may be given a score of 17 to 20 points. "Practically uniform in size and symmetry" has the following meanings with respect to the following styles of frozen sweet peppers:

(1) *Whole stemmed; whole unstemmed; halved.* Not less than 90 percent, by count, of the pods shall be at least 2½ inches in length, exclusive of the stem, and 2½ inches in diameter and shall be practically uniform in size and symmetry.

(2) *Sliced.* The units are practically uniform in size and the aggregate weight of all strips less than 1¼ inches in length does not exceed 30 percent, by weight, of all the units.

(3) *Diced.* The units are practically uniform in size and the aggregate weight of all the units which are noticeably smaller than one-half the area of an average sized unit and of all markedly large and irregular-shaped units does not exceed 10 percent, by weight, of all the units.

(c) *(B) classification.* Frozen sweet peppers that are reasonably uniform in size and symmetry may be given a score of 14 to 16 points. "Reasonably uniform in size and symmetry" has the following meanings with respect to the following styles of frozen sweet peppers:

(1) *Whole stemmed; whole unstemmed; halved.* Not less than 80 percent, by count, of the pods shall be at least 2½ inches in length, exclusive of the stem, and 2½ inches in diameter and shall be reasonably uniform in size and symmetry.

(2) *Sliced.* The units are reasonably uniform in size and the aggregate weight of all strips less than 1¼ inches in length does not exceed 40 percent, by weight, of all the units.

(3) *Diced.* The units are reasonably uniform in size and the aggregate weight of all units which are noticeably smaller than one-half the area of an average sized unit and of all markedly large and irregular-shaped units does not exceed 20 percent, by weight, of all the units.

(d) *(SStd.) classification.* Frozen sweet peppers that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a partial limiting rule).

[21 FR 6857, Sept. 11, 1956, as amended at 24 FR 1825, Mar. 13, 1959. Redesignated at

42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3009 Defects.

(a) *General.* The factor of defects refers to the freedom from grit, sand or silt, seeds, undeveloped seeds, core and stem material; the trimmings; and damaged and seriously damaged units.

(1) "Grit, sand, or silt" means any particle of earthy material.

(2) "Well trimmed" means that the unit is free from gouges or knife marks and with respect to whole unstemmed style that the stem is trimmed to not more than one-half inch length and with respect to whole stemmed and halved styles that the stem, core, seeds, and placenta tissue are neatly removed so as to retain substantially the appearance of a whole or halved unit.

(3) "Reasonably well trimmed" means that the unit is practically free from gouges or knife marks and with respect to whole unstemmed style that the stem is trimmed to not more than one-half inch length and with respect to whole stemmed and halved styles that the stem, core, seeds, and placenta tissue have been removed so as to retain to a reasonable extent the appearance of a whole or halved unit.

(4) "Damage" means any injury or blemish which materially affects the appearance or eating quality of the unit.

(5) "Serious damage" means any injury or blemish which seriously affects the appearance or eating quality of the unit.

(b) (*A*) *classification.* Frozen sweet peppers that are practically free from defects may be given a score of 26 to 30 points. "Practically free from defects" means that the pods in whole unstemmed, whole stemmed, and halved styles are well trimmed; that no grit, sand or silt may be present that affects the appearance and eating quality; and that seeds, undeveloped seeds, core and stem material, damaged and seriously damaged units individually or collectively do not materially affect the appearance and eating quality of the product.

(c) (*B*) *classification.* Frozen sweet peppers that are reasonably free from defects may be given a score of 21 to 25 points. Frozen sweet peppers that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the pods in whole unstemmed, whole stemmed and halved styles are reasonably well trimmed; that no grit, sand, or silt may be present that affects the appearance and eating quality; and that seeds, undeveloped seeds, core and stem material, damaged and seriously damaged units individually or collectively do not seriously affect the appearance and eating quality of the product.

(d) (*SStd.*) *classification.* Frozen sweet peppers that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

[21 FR 6857, Sept. 11, 1956, as amended at 22 FR 4532, June 2, 1957; 24 FR 1825, Mar. 13, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3010 Character.

(a) (*A*) *classification.* Frozen sweet peppers that possess a good character may be given a score of 25 to 30 points. "Good character" means that the units are firm, full fleshed and tender.

(b) (*B*) *classification.* Frozen sweet peppers that possess a reasonably good character may be given a score of 21 to 24 points. Frozen sweet peppers that fall into this classification shall not be graded above U.S. Grade B or U.S. Extra Standard regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the units are reasonably full fleshed, may lack firmness but are not soft or mushy.

(c) (*SStd.*) *classification.* Frozen sweet peppers that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3011 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.3012 Score sheet for frozen sweet peppers.

Size and kind of container

Container mark or identification

Label

Net weight (ounces)

Type

Style

Count of peppers (whole, halved)

Factors		Score points	
Color	20	(A)	17-20
		(B)	[1]14-16
		(SStd.)	[1]0-13
Uniformity of size and symmetry	20	(A)	17-20
		(B)	14-16
		(SStd.)	[2]0-13
Defects	30	(A)	26-30
		(B)	[1]21-25
		(SStd.)	[1]0-20
Character	30	(A)	25-30
		(B)	[1]21-24
		(SStd.)	[1]0-20
Total score	100		

Grade

Flavor

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

[21 FR 6857, Sept. 11, 1956, as amended at 24 FR 1826, Mar. 13, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Canned Onions

SOURCE: 22 FR 7782, Oct. 2, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.3041 Product description.

"Canned onions" means the canned product consisting of whole onions, properly prepared from clean, sound, succulent onion bulbs. The product is packed in accordance with good commercial practice and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

§ 52.3042 Grades of canned onions.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned onions that possess similar varietal characteristics; that possess a normal flavor; that possess a good color; that are practically uniform in size and shape; that are practically free from defects; that possess a good character; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned onions that possess similar varietal characteristics; that possess a normal flavor; that possess a fairly good color; that are fairly uniform in size and shape; that are fairly free from defects; that possess a fairly good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart: *Provided*, That the canned onions may be variable in size and shape if the total score is not less than 70 points.

(c) "Substandard" is the quality of canned onions that fail to meet the requirements of U.S. Grade C or U.S. Standard.

RECOMMENDED FILL OF CONTAINER, DRAINED WEIGHT, AND COUNT OF CANNED ONIONS

§ 52.3043 Fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full as practicable with onions without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.3044 Drained weights.

(a) *General.* The minimum drained weight recommendations for canned onions in Table I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades.

TABLE I—RECOMMENDED DRAINED WEIGHTS, IN OUNCES, FOR CANNED ONIONS

Container size or designation (metal, unless otherwise stated)	Maximum headspace allowable (measured from top of double seam)—(16th of an inch)	Sizes of canned onions (ounces)		
		Tiny	Small	Medium
8-ounce tall	7.6	4.5	4.5	4.5
No. 303	9.4	9.5	9	9
No. 303 glass	9.4	9	9	9
No. 10	13.6	64	63	60

(b) *Method for ascertaining drained weight.* The drained weight is determined by emptying the contents of the container upon a United States Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve to facilitate drainage, allowing the product to drain for two minutes and then weighing the sieve together with the product thereon. The drained weight is the weight of the sieve and the drained product less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 3 size can (404 x 414) or equivalent size, and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Compliance with recommended drained weights.* Compliance with the recommended drained weights is determined by averaging the drained weights from all the containers which are representative of a specific lot; and such lot is considered as meeting the recommendations if the following criteria are met.

(1) The average of the drained weights from all of the containers meets the applicable recommended drained weight:

(2) One-half or more of the containers meets the recommended drained weight; and

(3) The drained weight of each of the containers which do not meet the recommended drained weight is within the range of variability for good commercial practice.

§ 52.3045 Count of onions.

(a) *General.* The count recommendations in table II of this section are not incorporated in the grades of the finished product since count of onions, as such, is not a factor of quality for the purpose of these grades.

TABLE II—RECOMMENDED COUNT OF CANNED ONIONS

Container size or designation (metal unless otherwise stated)	Tiny	Small	Medium
8-ounce tall	15 and over	8 to 14, inclusive	
No. 303 and No. 303 glass	30 and over	15 to 29, inclusive	8 to 14, inclusive.
No 10	200 and over	100 to 199, inclusive	80 to 99, inclusive.

(b) *Compliance with recommended count of canned onions.* Compliance with the recommended count of canned onions is determined by averaging the counts from all the containers which are representative of a specific lot; and such lot is considered as meeting the recommendations if the following criteria are met:

(1) The average of the counts from all of the containers is within the range of the applicable recommended count;

(2) The counts of not more than one-sixth of the containers fail the range of such recommended count; and

(3) The count from each of the containers which fails such range is not outside such range by more than 10 percent or more than two onion bulbs, whichever is the greater.

FACTORS OF QUALITY

§ 52.3046 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors which are not scored.* (i) Varietal characteristics.

(ii) Flavor.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size and shape	30
Defects	30
Character	20
Total score	100

(b) *Normal flavor.* "Normal flavor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.3047 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, or 20 points.)

§ 52.3048 Color.

(a) *General.* The color of canned onions has reference to the predominating and characteristic color of the exterior surfaces of the onion bulbs.

(b) (*A*) *classification.* Canned onions that possess a good color may be given a score of 17 to 20 points. "Good color" means that the canned onions possess a reasonably bright, characteristic color which may include typical greenish areas on the surface of the bulbs; and that not more than 10 percent, by count, of the onions may individually possess such typical greenish areas, which, in the aggregate, exceed one-half of the surface area of the bulb.

(c) (*C*) *classification.* If the canned onions possess a fairly good color a score of 14 to 16 points may be given. Canned onions that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned onions possess a characteristic color which may include typical greenish areas on the surface of the bulbs; that the product is not materially affected by oxidation, or dull grayish-white casts, or watery-white casts, or other discoloration; and that not more than 20 percent, by count, of the onions may individually possess greenish areas, which, in the aggregate, exceed one-half of the surface area of the bulbs.

(d) (*SStd.*) *classification.* Canned onions that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3049 Uniformity of size and shape.

(a) *General.* Uniformity of size and shape refers to the degree of variation in size and shape of the individual onion bulbs in canned onions.

(1) "Poorly shaped" means that the length of the individual onion bulb exceeds the maximum length for the applicable diameter, as shown in table III of this section, or that the onion bulb is otherwise misshapen to the

extent that its appearance is seriously affected.

TABLE III—ONION DIMENSIONS

Diameter of onion [1]	Maximum length of onion [2] (inches)
1/2 inch	15/16
9/16 inch	1 1/16
5/8 inch	1 3/16
11/16 inch	1 5/16
3/4 inch	1 7/16
13/16 inch	1 9/16
7/8 inch	1 11/16
15/16 inch	1 13/16
1 inch	1 13/16
1 1/8 inches	2 1/8
1 1/4 inches	2 3/8
1 3/8 inches	2 5/8
1 1/2 inches	2 7/8

[1] Diameter is determined by measuring the greatest diameter at right angles to a straight line running from the stem end to the root end.

[2] Length is determined by measuring the over-all length of the onion.

(b) (*A*) *classification.* Canned onions that are practically uniform in size and shape may be given a score of 26 to 30 points. "Practically uniform in size and shape" means that:

(1) In a container with a count of less than 21 onions, not more than 10 percent by count, of the onions are poorly shaped and the weight of the second largest onion is not more than three times the weight of the second smallest onion.

(2) In a container with a count of 21 or more onions, not more than 10 percent, by count, of the onions are poorly shaped, and with respect to 95 percent, by count, of all the onions, the weight of the largest onion is not more than three times the weight of the smallest onion.

(c) (*C*) *classification.* If the canned onions are fairly uniform in size and shape a score of 21 to 25 points may be given. Canned onions that fall into this classification shall not be graded above "U.S. Grade C" or "U.S. Standard," regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size and shape" means that:

(1) In a container with a count of less than 21 onions, not more than 25 percent, by count, of the onions are poorly shaped, and the weight of the second largest onion is not more than four times the weight of the second smallest onion.

(2) In a container with a count of 21 or more onions, not more than 25 percent, by count, of the onions are poorly shaped, and with respect to 95 percent, by count, of all the onions, the weight of the largest onion is not more than four times the weight of the smallest onion.

(d) (*SStd.*) *classification.* Canned onions that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3050 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from extraneous vegetable material and from onion bulbs that are blemished or seriously blemished or affected by mechanical damage, loose scales, or detached centers, and to the trimming of the onion bulb.

(1) "Blemished" means affected by surface or internal discoloration to such an extent that the appearance or eating quality is materially affected. Internal yellow sprouts which show no discoloration are not considered as being within the meaning of the term "blemished."

(2) "Seriously blemished" means blemished to such an extent that the appearance or eating quality is seriously affected.

(3) "Mechanical damage" means damaged by crushing, gouging, or trimming to such an extent that the appearance of the onion bulb is materially affected.

(4) "Loose scales or pieces of scales" means scales or pieces of scales that are not attached to an onion bulb.

(5) "Detached center" means an onion bulb without its center portion.

(6) "Well trimmed" means that the top and roots of the onion bulb have been removed.

(b) (*A*) *classification.* (1) Canned onions that are practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means:

(i) With respect to the onions in all of the containers

(*a*) At least 95 percent, by count of the onions, are well trimmed, and

(*b*) For each 20 onions, there may be present not more than two loose scales or pieces of scales and one detached center; and

(ii) With respect to the onions in the individual containers.

(*a*) Not more than a total of 10 percent, by count of the onions in the container, are affected by mechanical damage, and

(*b*) Not more than 3 percent, by count of the onions in such container, are blemished, including not more than 1 percent, by count of the onions in such container, that are seriously blemished.

(2) Notwithstanding the requirements in paragraph (b)(1)(ii) of this section, one onion bulb in an individual container may be affected by one or more of the defects listed therein, although in excess of the percentages permitted for the particular defects: *Provided,* That the percentage of each such defect computed on the basis of all of the onions in all containers is within the percentage permitted for such defect.

(c) (*C*) *classification.* (1) Canned onions that are fairly free from defects may be given a score of 21 to 24 points. Canned onions that fall into this classification shall not be graded above "U.S. Grade C" or "U.S. Standard," regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means:

(i) With respect to the onions in all of the containers

(*a*) At least 90 percent, by count of the onions, are well trimmed, and

(*b*) For each 20 onions, there may be present not more than four loose scales or pieces of scales and two detached centers, and

(ii) With respect to the onions in the individual containers.

(*a*) Not more than a total of 20 percent, by count of the onions in the container, are affected by mechanical damage, and

(*b*) Not more than 5 percent, by count of the onions in such container, are blemished, including not more than 2 percent, by count of the onions in such container, that are seriously blemished

(2) Notwithstanding the requirements in paragraph (c)(1)(ii) of this section, one onion bulb in an individual container may be affected by one or more of the defects listed therein, although in excess of the percentages permitted for the particular defects: *Provided,* That the percentage of each such defect computed on the basis of all of the onions in all containers is within the percentage permitted for such defects.

(d) (*SStd.*) *classification.* Canned onions that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3051 Character.

(a) *General.* Character has reference to firmness and texture of the individual onion, and to the tendency to retain its conformation without becoming soft or spongy.

(b) (*A*) *classification.* Canned onions that possess a good character may be given a score of 17 to 20 points. "Good character" means that the onions are reasonably firm, reasonably tender, and not more than 10 percent, by count, are soft or spongy.

(c) (*C*) *classification.* Canned onions that possess a fairly good character may be given a score of 14 to 16 points. Canned onions that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the onions are fairly firm, fairly tender, and not more than 20 percent, by count, are soft or spongy.

(d) (*SStd.*) *classification.* Canned onions that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3052 Ascertaining the grade of a lot.

The grade of a lot of canned onions covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3053 Score sheet for canned onions.

Size and kind of container ....

Container mark or identification ....

Label ....

Net weight (ounces) ....

Vacuum (inches) ....

Drained weight (ounces) ....

Count (whole) ....

Varietal type ....

Factors		Score points	
Color	20	(A)	17–20
		(C)	[1] 14–16
		(SStd.)	[1] 0–13
Uniformity of size and shape.	30	(A)	26–30
		(C)	[1] 21–25
		(SStd.)	[2] 0–20
Defects	30	(A)	25–30
		(C)	[1] 21.24
		(SStd.)	[1] 0–20
Character	20	(A)	17–20
		(C)	[1] 14.16
		(SStd.)	[1] 0–13
Total score	100		

Flavor ....

Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Peanut Butter[1]

SOURCE: 37 FR 131, Jan. 6, 1972, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TEXTURES, TYPES, STYLES, GRADES

§ 52.3061 Product description.

"Peanut butter" means a product represented as the product defined in the Standards of Identity for Peanut Butter (21 CFR 164.150) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.3062 Textures of peanut butter.

(a) "Smooth" texture means the peanut butter has a very fine, very even texture with no perceptible grainy peanut particles.

(b) "Medium" texture means the peanut butter has a definite grainy texture with perceptible peanut particles approximating not more than 1/16 inch in any dimension.

(c) "Chunky" or "crunchy" texture means peanut butter which has a partially fine or partially grainy texture with substantial amounts of peanut particles larger than 1/16 inch in any dimension.

§ 52.3063 Types of peanut butter.

(a) *Stabilized type.* Stabilized peanut butter is prepared by any special process and/or with any suitable added ingredient(s) designed to prevent oil separation.

(b) *Nonstabilized type.* Nonstabilized peanut butter is prepared without special process or added ingredient(s) to prevent oil separation.

§ 52.3064 Styles of peanut butter.

(a) *Regular pack style.* Regular pack peanut butter is a stabilized type peanut butter prepared from peanuts from which the skins have been removed and to which salt and suitable nutritive sweetener(s) have been added.

(b) *Specialty-pack style.* Specialty pack peanut butter is any type or style of peanut butter that is not described in paragraph (a) of this section. This style includes, but is not limited to, peanut butter that is made from unblanched peanuts, and to which salt and/or a nutritive sweetener may or may not have been added.

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[1] NOTE: Compliance with the provisions of the standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.

§ 52.3065 Grades of peanut butter.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of peanut butter that has a good color, that has a good consistency, that is practically free from defects, that has a good flavor and good aroma, that has uniform dispersion of any added ingredient(s), and that scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of peanut butter that has a reasonably good color, that has a reasonably good consistency, that is reasonably free from defects, that has a reasonably good flavor and aroma, that has reasonably uniform dispersion of any added ingredient(s), and that scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of peanut butter that fails to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.3066 Ascertaining the grade.

The grade of peanut butter may be ascertained by considering, in addition to other requirements of the respective grade, the following factors: Color, consistency, absence of defects, and flavor and aroma. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
(1) Color	20
(2) Consistency	20
(3) Absence of defects	30
(4) Flavor and aroma	30
Total score	100

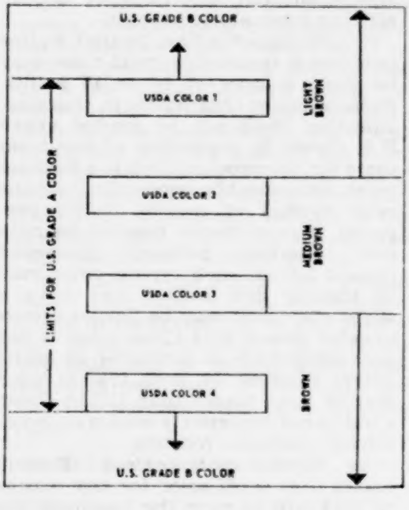
§ 52.3067 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.3068 Color.

(a) *General.* The color of peanut butter refers to the color hue and color intensity of the overall mass, regardless of the texture and regardless of the variety of peanuts from which prepared.

(b) *Color standards.* Peanut butter color may be classified in accordance with the following outline for the applicable U.S. Department of Agriculture Color Standards (hereinafter referred to as "USDA Colors"):



(c) The U.S. Department of Agriculture Color Standards shall be viewed under standard lighting conditions as follows: Compare the color of the color standard with a representative sample of peanut butter having an area and depth approximately equal to the color standard. A suitable light source of approximately 250 foot candle intensity and having a spectral quality approximating that of daylight under a moderately overcast sky and a color temperature of 7500 degrees Kelvin ±200 degrees is preferable. With the light source directly over the color standard and product, observation is made at an angle of 45 degrees and at a distance of about 24 inches from the product.

(d) The USDA Color Standards are available only from the licensed supplier:

Magnuson Engineers, Inc., 1010 Timothy Drive, San Jose, CA 95133

(e) (*A*) *classification.* Peanut butter that has a good color may be given a score of 18 to 20 points. "Good color" means a rich color typical of peanut butter prepared from properly roasted peanuts and otherwise properly processed peanut butter; such typical color is no less brown than USDA Color 1 or no more brown than USDA Color 4, and is without any tinge of a dull, grey, or other abnormal cast.

(f) (*B*) *classification.* Peanut butter that has a reasonably good color may be given a score of 16 or 17 points. Peanut butter that scores in this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means color typical of peanut butter prepared from properly roasted peanuts and otherwise properly processed peanut butter; such typical color may be slightly dull and/or may have a slight grey cast; may be lighter brown in color than USDA Color 1 but is not excessively pale as indicative of insufficient roasting; or, such typical color may be more brown than USDA Color 4 but is not excessively brown as indicative of excessive roasting.

(g) (*SStd*) *classification.* Peanut butter that is off color for any reason or that fails to meet the requirements of paragraph (f) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3069 Consistency.

(a) *General.* The factor of consistency refers to the spreadability of the product, and to the degree of oil separation, if any.

(b) *Determination of consistency.* Consistency of peanut butter is determined at a product temperature of not less than 70° F. nor more than 80° F. without mixing the product in the stabilized type, and after reasonable mixing of the product in the nonstabilized type.

(c) (*A*) *classification.* Peanut butter that has good consistency may be given a score of 18 to 20 points. "Good consistency" means that the peanut butter shall spread easily, shall not be thin nor more than slightly stiff; and, in addition to the foregoing: (1) In stabilized type of peanut butter, there is no noticeable oil separation or (2) in nonstabilized type of peanut butter, there is no more than slight mixing required to disperse any separated oil.

(d) (*B*) *classification.* Peanut butter that has reasonably good consistency may be given a score of 16 or 17 points. Peanut butter that scores in this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good consistency" means that the peanut butter is spreadable; may be moderately, but not excessively, thin; may be moderately, but not excessively, stiff; and, in addition to the foregoing: (1) In stabilized type of peanut butter, there may be no more than slightly noticeable oil separation or (2) in nonstabilized peanut butter, there may be no excessive oil separation that causes noticeable dryness or that requires more than moderate mixing to disperse the oil.

(e) (*SStd*) *classification.* Peanut butter that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3070 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from dark particles and from any other defects (including water-insoluble inorganic residue) which affect the wholesomeness or detract from the appearance or edibility of the product: *Provided,* That in the specialty-pack style of peanut butter made from unblanched peanuts, particles of dark skins shall not be considered as defects.

(b) *Definition of water-insoluble inorganic residue.* "Water-insoluble inorganic residue" means the residue as determined in accordance with the method referenced in § 52.3072.

(c) (*A*) *classification.* Peanut butter that is practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the presence of dark particles and any other defects does not more than slightly affect the appearance or eating quality of the product; and means that there may be present not more than 8 milligrams of water-insoluble inorganic residue per 100 grams of peanut butter: *Provided,* That such residue which may be present does not affect the edibility or wholesomeness of the product.

(d) (*B*) *classification.* Peanut butter that is reasonably free from defects may be given a score of 24 to 26 points. Peanut butter that falls into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the presence of dark particles and any other defects does not seriously detract from the appearance or eating quality of the product; and means that there may be present not more than 20 milligrams of water-insoluble inorganic residue per 100 grams of peanut butter: *Provided,* That such residue which may be present does not affect the edibility or wholesomeness of the product.

(e) (*SStd*) *classification.* Peanut butter that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3071 Flavor and aroma.

(a) (*A*) *classification.* Peanut butter that has a good flavor and good aroma may be given a score of 27 to 30 points. "Good flavor and good aroma" means a flavor and aroma: Typical of freshly roasted and freshly ground peanuts; when applicable, of properly proportioned and blended ingredients; free from staleness; free from rancidity; and free from objectionable flavors and objectionable odors of any kind. To score in this classification, there may be not less than 1.0 percent, nor more than 1.8 percent, by weight, of salt in the finished peanut butter: *Provided,* That the requirements for salt in the finished peanut butter of an unsalted "specialty-pack" style are waived.

(b) (*B*) *classification.* Peanut butter that has reasonably good flavor and reasonably good aroma may be given a score of 24 to 26 points. Peanut butter that scores in this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor and reasonably good aroma" means a flavor and aroma that is typical of properly prepared peanut butter, which may be lacking good flavor and good aroma, but is free of objectionable flavors and objectionable aromas of any kind. To score in this classification there may be not less than 0.5 percent, nor more than 2.5 percent, by weight, of salt in the finished peanut butter: *Provided,* That the requirements for salt in the finished peanut butter of an unsalted "specialty-pack" style are waived.

(c) (*SStd*) *classification.* Peanut butter that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSIS

§ 52.3072 Methods of analysis for water-insoluble inorganic residue and salt.

The water-insoluble inorganic residue and salt in peanut butter is determined in accordance with the latest official method outlined in the Official Methods of Analysis of the Association of Official Analytical Chemists or any other method that gives equivalent results.

LOT COMPLIANCE

§ 52.3073 Ascertaining the grade of a lot.

The grade of a lot of peanut butter covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3074 Score sheet for peanut butter.

Size and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....
Texture (smooth, medium, chunky) ....
Type (Stabilized, Non-Stabilized) ....
Style ....
Water insoluble inorganic residue (mg./100 grams) ....
Salt (percent by weight) (when applicable) ....
Color ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	[1]16–17
		(SStd)	[1]0–15
Consistency	20	(A)	18–20
		(B)	[1]16–17
		(SStd)	[1]0–15
Absence of defects.	30	(A)	27–30
		(B)	[1]24–26
		(SStd)	[1]0–23
Flavor and aroma.	30	(A)	27–30
		(B)	[1]24–26
		(SStd)	[1]0–23
Total score	100		

Grade ....

[1] Indicates limiting rule

Subpart—United States Standards for Grades of Sugarcane Sirup

SOURCE: 22 FR 1707, Mar. 16, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.3101 Product description.

Sugarcane sirup is the clean, sound liquid product obtained by evaporating the juice of sugarcane without the removal of any of the soluble solids or by dissolving sugarcane concrete in water, and is produced and packed in accordance with good commercial practice.

§ 52.3102 Types of sugarcane sirup.

The type of sugarcane sirup is not incorporated in the grades of the finished product since the type of sugarcane sirup, as such, is dependent upon the method of preparation and processing and, therefore, is not a factor of quality for the purpose of these grades. Sugarcane sirup may be prepared and processed as one of the following types:

(a) "Sulfured sugarcane sirup" means sugarcane sirup which is made by the sulfitation process and contains not more than 100 parts per million of sulfur dioxide.

(b) "Unsulfured sugarcane sirup" means sugarcane sirup which is not made by the sulfitation process.

(c) It is recommended that sugarcane sirup of these types contain not less than 74 percent, by weight, of soluble solids (74° Brix; 39.50° Baume).

(d) The maximum ash content recommended for the respective type of sugarcane sirup is given in Table No. 1 of this section.

TABLE 1—RECOMMENDED MAXIMUM ASH CONTENT FOR THE RESPECTIVE TYPE OF SUGARCANE SIRUP

Type of sugarcane sirup	Ash (percent)
Unsulfured	4.5
Sulfured	6.0

§ 52.3103 Grades of sugarcane sirup.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of sugarcane sirup that possesses a good color; that possesses a good flavor; that is practically free from defects; that is practically clear; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the score is not less than 90 points: *Provided*, That the sugarcane sirup may possess a reasonably good color and may be reasonably clear if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of sugarcane sirup that possesses a reasonably good color; that possesses a reasonably good flavor; that is reasonably free from defects;

that is reasonably clear; and that scores not less than 80 points when rated in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of sugarcane sirup that possesses a fairly good color; that possesses a fairly good flavor; that is fairly free from defects; that is fairly clear; and that scores not less than 70 points when rated in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of sugarcane sirup that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.3104 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled with sirup as full as practicable.

FACTORS OF QUALITY

§ 52.3105 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	30
Flavor	30
Defects	20
Clarity	20
Total score	100

§ 52.3106 Ascertaining the score for the factors which are rated.

The essential variations within each factor which is rated are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is rated is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.3107 Color.

(a) *General.* Color has reference to the color of sugarcane sirup when examined by means of the U.S.D.A. permanent glass color standards for sugarcane sirup. Information regarding these color standards may be obtained by writing to the Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, U.S. Department of Agriculture, Washington, D.C., 20250.

(b) (*A*) *Classification.* Sugarcane sirup that possesses a good color may be given a score of 27 to 30 points. "Good color" means that the color is bright and typical of sirup properly prepared and processed from sound, well matured sugarcane, and is equal to or lighter in color than U.S.D.A. permanent glass color standard No. 1 for sugarcane sirup.

(c) (*B*) *classification.* If the sugarcane sirup possesses a reasonably good color, a score of 24 to 26 points may be given. "Reasonably good color" means that the color is reasonably bright, and is equal to or lighter in color than U.S.D.A. permanent glass color standard No. 2 for sugarcane sirup.

(d) (*C*) *classification.* Sugarcane sirup that possesses a fairly good color may be given a score of 21 to 23 points. Sugarcane sirup that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the sugarcane sirup possesses a color that is equal to or lighter in color than U.S.D.A. permanent glass color standard No. 3 for sugarcane sirup.

(e) (*SStd.*) *classification.* Sugarcane sirup that fails to meet the requirements of the above paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3108 Flavor.

(a) *General.* The factor of flavor refers to the palatability of the sugarcane sirup and the effect on flavor of the method of preparation for the particular type of sugarcane sirup.

(b) (*A*) *classification.* Sugarcane sirup that possesses a good flavor may be given a score of 27 to 30 points. "Good flavor" means that the product possesses a good, characteristic flavor for the type of sugarcane sirup and is free from objectionable flavors, including but not limited to, objectionable flavors caused by scorching or fermentation or the presence of any foreign or disagreeable flavor or odor.

(c) (*B*) *classification.* If the sugarcane sirup possesses a reasonably good flavor, a score of 24 to 26 points may be given. Sugarcane sirup that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good flavor" means that the product possesses a reasonably good, characteristic flavor for the type of sugarcane sirup and is free from objectionable flavors, including but not limited to, objectionable flavors caused by scorching or fermentation or the presence of any foreign or disagreeable flavor or odor.

(d) (*C*) *classification.* Sugarcane sirup that possesses a fairly good flavor may be given a score of 21 to 23 points. Sugarcane sirup that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means that the product possesses a fairly good flavor for the type of sugarcane sirup and is free from objectionable flavors, including but not limited to, objectionable flavors caused by scorching or fermentation or the presence of any foreign or disagreeable flavor or odor.

(e) (*SStd.*) *classification.* Sugarcane sirup that fails to meet the requirements of the above paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3109 Defects.

(a) *General.* Defects refers to the cleanliness of the product and the degree of freedom from harmless extraneous material, such as particles of fiber, carbon, or earthly material which may be in suspension or deposited as sediment in the container.

(b) (*A*) *classification.* Surgarcane sirup that is practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means that the appearance and edibility of the product are not affected by the presence of harmless extraneous matter or other material which may be in suspension or deposited as sediment in the container.

(c) (*B*) *classification.* If the sugarcane sirup is reasonably free from defects, a score of 16 to 17 points may be given. Sugarcane sirup that falls into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the appearance and edibility of the product are not materially affected by the presence of harmless extraneous matter or other material which may be in suspension or deposited as sediment in the container.

(d) (*C*) *classification.* Sugarcane sirup that is fairly free from defects may be given a score of 14 or 15 points. Sugarcane sirup that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the appearance and edibility of the product are not seriously affected by the presence of harmless extraneous matter or other material which may be in suspension or deposited as sediment in the container.

(e) (*SStd.*) *classification.* Sugarcane sirup that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 10 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3110 Clarity.

(a) *General.* The factor of clarity has reference to the degree of freedom from fine particles of mineral matter, colloidal or amorphous material, or any other suspended matter that may affect the clarity, appearance, or edibility of the product.

(b) (*A*) *classification.* Sugarcane sirup that is practically clear may be given a score of 18 to 20 points. "Practically clear" means that the sugarcane sirup may contain not more than a trace of finely divided particles of suspended material which does not affect the appearance or edibility of the product.

(c) (*B*) *classification.* If the sugarcane sirup is reasonably clear a score of 16 or 17 points may be given. "Reasonably clear" means that the sugarcane sirup may contain finely divided particles of suspended material which does not materially affect the appearance or edibility of the product.

(d) (*C*) *classification.* Sugarcane sirup that is fairly clear may be given a score of 14 or 15 points. Sugarcane sirup that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly clear" means that the appearance or edibility of the sugarcane sirup may be materially but not seriously affected by the presence of finely divided particles of suspended material.

(e) (*SStd.*) *classification.* Sugarcane sirup that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

DEFINITIONS AND METHODS OF ANALYSIS

§ 52.3111 Color of sugarcane sirup.

(a) The color classification of sugarcane sirup is determined by means of the U.S.D.A. permanent glass color standards for sugarcane sirup as outlined in this subpart.

(b) Partially crystallized sugarcane sirup is liquefied by heating to approximately 54.4° C. (130° F.) and cooled to approximately 20° C. (68° F.) before ascertaining the color of the sirup by means of the U.S.D.A. permanent glass color standards for sugarcane sirup.

§ 52.3112 Application of U.S.D.A. permanent glass color standards in classifying the color of sugarcane sirup.

(a) *Sample containers.* The sample containers for use in making the visual color determination, as set forth in this subpart, are cells of colorless optical glass or plastic, having an internal width of 3.175 mm. (⅛ inch) with outside dimensions of approximately 1$\frac{7}{16}$ inches by 3½ inches.

(b) *Comparator; viewing box.* The comparator or viewing box for the entire color range in the visual comparison test is divided into five compartments. Each compartment is provided with openings approximately 1$\frac{3}{16}$ inches square in the two parallel sides. The U.S.D.A. permanent glass color standards are mounted in a fixed position in the front openings of compartments 1, 3, and 5 of the comparator, compartments 2 and 4 being adapted to receive the sample containers.

(c) *Visual comparison test.* The color of a sample of sugarcane sirup is compared with the U.S.D.A. permanent glass color standards in the following manner to determine its color classification:

(1) Place the sample of sugarcane sirup in a clean, dry sample container.

(2) Place the container filled with the sample of sugarcane sirup successively in compartments 2 and 4 of the comparator, and visually compare the color of the sample with that of each of the glass color standards by looking through them at a diffuse source of natural or artificial daylight.

§ 52.3113 Soluble solids; Brix value.

Soluble solids means the solids content of sugarcane sirup or the Brix value as determined by the double dilution method by means of a Brix hydrometer corrected to 20° C. (68° F.).

§ 52.3114 Ash.

Percent ash means the ash content of sugarcane sirup determined as sulfated ash as outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists, Seventh Edition, 1950." Percent ash is calculated on the basis of the percent soluble solids content of the product and expressed as percent of sulfated ash with no deduction.

§ 52.3115 Sulfur dioxide, p.p.m.

Means the total sulfites determined by the Monier-Williams method, calculated as parts per million of sulfur dioxide (SO_2).

§ 52.3116 Reducing sugars.

The percent, by weight, of reducing sugars is calculated on the basis of the percent of soluble solids. Reducing sugars are determined by the Lane-Eynon volumetric method for reducing sugars.

§ 52.3117 Sucrose.

The percent, by weight, of sucrose is calculated on the basis of the percent of soluble solids. The determination may be made by the Clerget, or double polarization, method using invertase as the inverting agent, by Jackson-Gillis Method Number IV, or by the chemical method, before and after inversion.

§ 52.3118 Methods of analysis.

The analysis indicated in this subpart shall be made in accordance with methods of analysis given in "Official Methods of Analysis of the Association of Official Agricultural Chemists" or by any other means which give equivalent results.

LOT INSPECTION AND CERTIFICATION

§ 52.3119 Ascertaining the grade of a lot.

The grade of a lot of the processed product covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87).

[22 FR 3547, May 22, 1957. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

SCORE SHEET

§ 52.3120 Score sheet for sugarcane sirup.

Size and kind of container ....
Container mark or identification ....
Label ....
Type ....
Soluble solids, percent; Brix (degrees) ....
Sucrose, percent ....
Reducing sugars, percent ....
Ash, percent ....

Factors		Score points	
Color	30	(A)	27-30
		(B)	24-26
		(C)	[1]21-23
		(SStd.)	[1]0-20
Flavor	30	(A)	27-30
		(B)	[1]24-26
		(C)	[1]21-23
		(SStd.)	[1]0-20
Defects	20	(A)	18-20
		(B)	[1]16-17
		(C)	[1]14-15
		(SStd.)	[1]0-13
Clarity	20	(A)	18-20
		(B)	16-17
		(C)	[1]14-15
		(SStd.)	[1]0-13
Total score	100		

Grade ....
Color ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Sweet Cherries

SOURCE: 23 FR 560, Jan. 29, 1958, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES AND GRADES

§ 52.3161 Product description.

Frozen sweet cherries are prepared from the clean, sound, properly matured fresh fruit of any commercial variety of sweet cherries, which are sorted, washed, and drained; which may be packed with or without the addition of nutritive sweetening ingredient(s), and which are frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.3162 Types of frozen sweet cherries.

(a) Light Sweet Type (such as Napoleon or Royal Ann variety).

(b) Dark Sweet Type (such as Bing or Lambert varieties).

§ 52.3163 Styles of frozen sweet cherries.

(a) "Pitted" means frozen sweet cherries that are whole, stemmed cherries with pits removed.

(b) "Unpitted" means frozen sweet cherries that are whole, stemmed cherries without the pits removed.

§ 52.3164 Grades of frozen sweet cherries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen sweet cherries that possess similar varietal characteristics; that possess a normal flavor; that possess a good color; that possess a good appearance with respect to size and symmetry; that are practically free from defects; that possess a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 85 points: *Provided*, That frozen sweet cherries may have a reasonably good appearance with respect to size and symmetry, if the total score is not less than 85 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen sweet cherries that possess similar varietal characteristics; that possess a normal flavor; that possess a reasonably good color; that possess a reasonably good appearance with respect to size and symmetry; that are reasonably free from defects; that possess a reasonably good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 70 points: *Provided*, That frozen sweet cherries may vary in size and symmetry, if the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen sweet cherries that fail to meet the requirements of U.S. Grade B or U.S. Choice.

FACTORS OF QUALITY

§ 52.3165 Ascertaining the grade.

(a) *General*. The grade of frozen sweet cherries is determined immediately after thawing to the extent that the units may be separated easily and are free from ice crystals. In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(1) *Factors not rated by score points*.

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points*. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	30
Size and Symmetry	10
Defects	30
Character	30
Total score	100

(b) *Normal flavor*. "Normal flavor" means that the product has a normal, characteristic flavor and odor for the varietal type and is free from objectionable flavors and objectionable odors of any kind.

§ 52.3166 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "25 to 30 points" means 25, 26, 27, 28, 29 or 30 points).

§ 52.3167 Color.

(a) (*A*) *classification*. Frozen sweet cherries that possess a good color may be given a score of 25 to 30 points. "Good color" means that the sweet cherries possess a reasonably uniform color that is bright and typical of well ripened sweet cherries and not more than 10 percent, by count, of cherries may vary markedly from this color because of discoloration due to oxidation, improper processing, or other causes, or because of not well ripened sweet cherries.

(b) (*B*) *classification*. Frozen sweet cherries that possess a reasonably good color may be given a score of 21 to 24 points. Frozen sweet cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the sweet cherries possess a color that is reasonably bright and typical of well-ripened sweet cherries and that not more than 20 percent, by count, of cherries may vary markedly from this color because of discoloration due to oxidation, improper processing, or other causes, or because of sweet cherries that are not well ripened.

(c) (*SStd.*) *classification.* Frozen sweet cherries that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3168 Size and symmetry.

(a) *General.* The factor of size and symmetry refers to the shape and uniformity of diameter of the frozen cherries.

(1) "Diameter" of a cherry is determined on the basis of the diameter of a rigid round hole through which the cherry will just pass without using force. In pitted cherries, the diameter is determined as that which approximates the apparent original size had the cherry not been pitted.

(2) "Well formed" means that the cherries, including halves of doubles, have the shape characteristic of the variety.

(b) (*A*) *classification.* Frozen sweet cherries that possess a good appearance with respect to size and symmetry may be given a score of 9 or 10 points. "Good appearance with respect to size and symmetry" has the following meanings:

(1) No unseparated doubles are present;

(2) 95 percent, by count, of the cherries are well formed; and

(3) The diameter of the cherry with the greatest diameter may exceed the diameter of the cherry with the smallest diameter by not more than ¼ inch; and in 90 percent, by count, of all the cherries which are most uniform in diameter the diameters do not vary by more than 1/10 inch.

(c) (*B*) *classification.* Frozen sweet cherries that possess a reasonably good appearance with respect to size and symmetry may be given a score of 7 or 8 points. "Reasonably good appearance with respect to size and symmetry" has the following meanings:

(1) Not more than 10 percent, by count, of the cherries may be unseparated doubles;

(2) 85 percent, by count, of the cherries are well formed;

(3) In 90 percent, by count, of all the cherries which are most unfirom in diameter the diameters do not vary more than ¼ inch.

(d) (*SStd.*) *classification.* Frozen sweet cherries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 6 points and shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3169 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous material, pits, and from damaged and seriously damaged cherries.

(1) "Cherry" means a whole cherry, whether or not pitted, or portions of such cherries which in the aggregate approximate the average size of the cherries.

(2) "Harmless extraneous material" means any vegetable substance (including, but not being limited to, a leaf or a stem and any portions thereof) that is harmless.

(3) "Pit" means a whole pit or portions of pits computed as follows:

(i) A single piece of pit shell, whether or not within or attached to a whole cherry, that is larger than one-half pit shell is considered as one pit;

(ii) A single piece of pit shell, whether or not within or attached to a whole cherry, that is not larger than one-half pit shell is considered as one-half pit;

(iii) Pieces of pit shell, within or attached to a whole cherry, when their combined size is larger than one-half pit shell are considered as one pit; and

(iv) Pieces of pit shell, within or attached to a whole cherry, when their combined size is not larger than one-half pit shell are considered as one-half pit.

(4) "Damaged" means any injury which materially affects the appearance or eating quality of the cherry and includes, but is not limited to:

(i) Blemished cherries that are affected by:

(*a*) Any surface blemish having an aggregate area equivalent to that of a circle 9/32 inch in diameter but not exceeding that of a circle 12/32 (3/8) inch in diameter and not extending into the tissue of the fruit.

(*b*) Any blemish having an aggregate area less than that of a circle 9/32 inch in diameter and extending into the tissue of the fruit.

(ii) Checks or cracks with slight discoloration and equivalent to 9/32 inch in length but not more than 12/32 (3/8) inch in length.

(5) "Seriously damaged" means any injury which seriously affects the appearance or eating quality of the cherry and includes, but is not limited to:

(i) Blemished cherries that are affected by:

(*a*) Any surface blemish having an aggregate area exceeding that of a circle 12/32 (3/8) inch in diameter and not extending into the tissue of the fruit.

(*b*) Any blemish having an aggregate area exceeding that of a circle 9/32 inch in diameter and extending into the tissue of the fruit.

(ii) Checks or cracks with discoloration and more than 12/32 (3/8) inch in length.

(b) (*A*) *classification.* Frozen sweet cherries that are practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means that:

(1) For each 20 ounces net weight there may be present not more than:

(i) 1 piece harmless extraneous material.

(ii) 1 pit in pitted cherries.

(2) Not more than 7 percent, by count, of the cherries may be damaged and seriously damaged: *Provided,* That not more than 3 percent, by count, of all of the cherries are seriously damaged.

(c) (*B*) *classification.* Frozen sweet cherries that are reasonably free from defects may be given a score of 21 to 24 points. Frozen cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) For each 20 ounces, net weight, there may be present not more than:

(i) 2 pieces of harmless extraneous material;

(ii) 1 pit in pitted cherries;

(2) Not more than 15 percent, by count, of the cherries may be damaged and seriously damaged: *Provided,* That not more than 5 percent, by count, of all the cherries are seriously damaged.

(d) (*SStd*) *classification.* Frozen sweet cherries that fail the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3170 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture and tenderness, and the relative thickness of flesh of the frozen sweet cherries.

(b) (*A*) *classification.* Frozen sweet cherries that possess a good character may be given a score of 26 to 30 points. "Good character" means that the cherries possess a tender, fleshy texture, typical of well-ripened, properly processed frozen sweet cherries; and that not more than 10 percent, by count, of the cherries may possess a reasonably good character.

(c) (*B*) *classification.* Frozen sweet cherries that possess a reasonably good character may be given a score of 21 to 25 points. Frozen sweet cherries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the cherries possess the texture of reasonably well-ripened frozen sweet cherries that are properly processed; the texture is reasonably fleshy and the cherries reasonably tender, or the tenderness may be variable from slightly soft to slightly firm; and that not more than 15 percent, by count, of the cherries may be overripe or immature or otherwise fail to meet at least a reasonably good character.

(d) (*SStd.*) *classification.* Frozen sweet cherries that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3171 Ascertaining the grade of a lot.

The grade of a lot of frozen sweet cherries covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3172 Score sheet for frozen sweet cherries.

Number, size and kind of container ....
Label; style of pack; fruit-sugar ratio (if shown) ....
Container mark or identification ....
Net weight (ounces) ....
Type ....
Style ....

Factors		Score points	
Color	30	(A)	25-30
		(B)	[1]21-24
		(SStd.)	[1]0-20
Size and symmetry.	10	(A)	9-10
		(B)	7-8
		(SStd.)	[2]0-6
Defects	30	(A)	25-30
		(B)	[1]21-24
		(SStd.)	[1]0-20
Character	30	(A)	26-30
		(B)	[1]21-25
		(SStd.)	[1]0-20
Total score	100		

Normal flavor ....
Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Dried Prunes

SOURCE: 21 FR 8177, Oct. 25, 1956, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, VARIETAL TYPES, SIZES, GRADES

§ 52.3181 Product description.

Dried prunes are prepared from sound, properly matured prune plums from which the greater portion of moisture is removed by drying. The dried prunes are cleaned to assure a wholesome product; they may be treated with water or steam; and a safe and suitable preservative may be added.

[30 FR 11596, Sept. 10, 1965. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3182 Varietal types of dried prunes.

(a) *Type I.* French; or Robe; or a mixture of French and Robe.

(b) *Type II.* Italian.

(c) *Type III.* Imperial; or Sugar; or a mixture of Imperial and Sugar.

(d) *Type IV.* Any other types; or mixtures of any types other than mixtures in Type I and Type III of this section.

§ 52.3183a Styles of dried prunes.

(a) Whole Unpitted—from which pits have not been removed.

(b) Whole Pitted—from which pits have been removed.

[30 FR 11596, Sept. 10, 1965. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3183b Count-sizes of whole unpitted dried prunes.

(a) *Count-sizes.* Except for U.S. Grade A or U.S. Fancy, the count-sizes of dried prunes are not incorporated in the grades of dried prunes. The count-sizes of dried prunes in this subpart refer to the count (or number) of prunes per pound of dried prunes. The various sizes of dried prunes for the respective varietal types are commonly designated as follows, but may be designated by other numerical expressions:

(1) *Type I; Type IV.* 30/40, 40/50, 50/60, 60/70, 70/80, 80/90, 90/100, 100/120, 120 and over.

(2) *Type II.* 25/35, 35/45, 30/40, 40/50, 50/60, 60/70, 70/80, 80/90, 90/100.

(3) *Type III.* 15/20, 18/24, 20/30, 30/40, 40/50, 50/60, 60/70.

(b) *Recommended size nomenclature.* The following size nomenclature is recommended for the respective "countsizes" of dried prunes:

Extra large	Average: Not more than 43 prunes per pound.
Large	Average: Not more than 53 prunes per pound.
Medium	Average: Not more than 67 prunes per pound.
Small	Average: Not more than 85 prunes per pound.

[21 FR 8177, Oct. 25, 1956. Redesignated at 30 FR 11596, Sept. 10, 1965 and 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3184 Grades of dried prunes.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of dried prunes that, except for mixed types, possess similar varietal characteristics; that are fairly uniform in size and average 85 prunes or less per pound; that meet the applicable moisture limits in Table IV of this subpart but regardless of size and kind of packaging are reasonably uniform in moisture; and that do not exceed the total allowances and limitations for defects shown in Table I of this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of dried prunes that, except for mixed types, possess similar varietal characteristics; that are fairly uniform in size; that meet the applicable moisture limits in Table IV of this subpart but regardless of size and kind of packaging are reasonably uniform in moisture; and that do not exceed the total allowances and limitations for defects shown in Table II of this subpart.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of dried prunes that, except for mixed types, possess similar varietal characteristics; that are fairly uniform in size; that meet the applicable moisture limits in Table IV of this subpart but regardless of size and kind of packaging are reasonably uniform in moisture; and that do not exceed the total allowances and limitations for defects shown in Table III of this subpart

(d) "Substandard" is the quality of dried prunes that meet the applicable moisture limits in Table IV of this subpart but regardless of size and kind of packaging are reasonably uniform in moisture; and that may fail to meet other requirements for U.S. Grade C or U.S. Standard, but not more than 5 percent, by weight, of the dried prunes may be affected by mold, dirt, foreign material, insect infestation, or decay: *Provided,* That not more than 1 percent, by weight, of the dried prunes may be affected by decay.

TABLE I—U.S. GRADE A OR U.S. FANCY; ALLOWANCES FOR DEFECTS

Total allowance	Limitations		
Not more than a total of 10 percent, by weight, may be damaged or affected by: Off-color. Poor texture. End cracks. Skin or flesh damage.[2] Fermentation. Scars. Heat damage. Insect injury. Other means. Mold. Dirt. Foreign material. Inset infestation. Decay.	Not more than 6 percent, by weight, may be damaged or affected by: Poor texture. End cracks. Skin or flesh damage.[2] Fermentation. Scars. Heat damage. Insect injury. Other means. Mold. Dirt. Foreign material. Insect infestation. Decay.	Not more than 3 percent, by weight, may be affected by: Mold. Dirt. Foreign material. Insect infestation. Decay.	Not more than 1 percent, by weight, may be affected by: Decay.

TABLE II—U.S. GRADE B OR U.S. CHOICE: ALLOWANCES FOR DEFECTS

Total allowance	Limitations		
Not more than a total of 15 percent, by weight, may be damaged or affected by: Off-color. Poor texture. End cracks. Skin or flesh damage.[2] Fermentation. Scars. Heat damage. Insect injury. Other means. Mold. Dirt. Foreign material. Insect infestation. Decay.	Not more than 8 percent, by weight, may be damaged or affected by: Poor texture. End cracks. Skin or flesh. damage.[2] Fermentation. Scars. Heat damage. Inset injury. Other means. Mold. Dirt Foreign material. Insect infestation. Decay.	Not more than 4 percent, by weight, may be affected by: Mold Dirt. Foreign material. Inset infestation. Decay.	Not more than 1 percent, by weight, may be affected by: Decay.

TABLE III—U.S. GRADE C OR U.S. STANDARD ALLOWANCES FOR DEFECTS

Total allowance	Limitations		
Not more than a total of 20 percent, by weight, may be damaged or affected by: Off-color. Poor texture. End cracks.[1] Skin or flesh damage.[2] Fermentation. Scars. Heat damage. Insect injury. Other means. Mold.	Not more than 10 percent, by weight, may be damaged or affected by: End cracks.[1] Skin or flesh damage.[2] Fermentation. Scars. Heat damage. Insect injury. Other means. Mold. Dirt.	Not more than 8 percent, by weight, may be damaged or affected by: Skin or flesh damage.[2] Fermentation. Scars. Heat damage. Insect injury. Other means. Mold. Dirt. Foreign material.	Not more than 5 percent, by weight, may be affected by: Mold. Dirt. Foreign material. Insect infestation. Decay. *Provided*, That not more than 1 percent, by weight, may be affected by decay.

TABLE III—U.S. GRADE C OR U.S. STANDARD ALLOWANCES FOR DEFECTS—Continued

Total allowance	Limitations		
Dirt. Foreign material. Insect infestation. Decay.	Foreign material. Insect infestation. Decay.	Insect infestation. Decay.	

[1] Except that each 1 percent of end cracks to, and including, 8 percent, by weight, shall be considered as ½ percent damaged by end cracks; and any additional end cracks shall be calculated as true percentage, by weight.

[2] Not applicable to "Whole Pitted" style.

TABLE IV—MOISTURE ALLOWANCES FOR DRIED PRUNES

[Non-hermetically sealed containers; 10 pounds or more]

Grades	Maximum moisture limits (percent)	
	Counts averaging 60 or less per pound	Counts averaging 61 or more per pound
U.S. Grade A or U.S. fancy	25	24
U.S. Grade B or U.S. choice	25	24
U.S. Grade C or U.S. standard	25	24
Substandard	25	24

[21 FR 8177, Oct. 25, 1956, as amended at 30 FR 11596, Sept. 10, 1965. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

MOISTURE, UNIFORMITY OF SIZE, DEFECTS

§ 52.3185 Moisture limits.

Dried prunes shall not exceed the moisture limits for the applicable grades and kind and size of packaging as designated in Table IV of this subpart except there is no moisture limit when safe and suitable preservatives have been added. "Moisture" means the percentage by weight of the finished dried prunes, exclusive of pits, that is moisture when determined by the Dried Fruit Moisture Tester Method or in accordance with methods that give equivalent results. The moisture limits in Table IV apply only to so-called "bulk packs" of dried prunes packaged in non-hermetically sealed containers holding 10 pounds or more of dried prunes when safe and suitable preservatives have not been added. Such containers include, but are not limited to, wood boxes or fiber boxes.

[30 FR 11596, Sept. 10, 1965. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3186 Definitions for uniformity of size.

(a) *Fairly uniform in size.* "Fairly uniform in size" means that in a sample of 100 ounces:

(1) For prunes that average 53 prunes or less per pound, the count per pound of 10 ounces of the smallest prunes does not vary from the count per pound of 10 ounces of the largest prunes by more than 25 points; or

(2) For prunes that average 54 prunes or more per pound, the count per pound of 10 ounces of the smallest prunes does not vary from the count per pound of 10 ounces of the largest prunes by more than 45 points.

§ 52.3187 Definitions and explanations of defects.

Dried prunes damaged or affected by the following are scorable as defects:

(a) *Off-color.* "Off-color" means a skin color different from characteristic black, blue-black, reddish-purple, or other characteristic skin color for the type.

(b) *Poor texture.* "Poor texture" means porous, woody, or fibrous flesh or immature prunes or prunes possessing flesh interspersed with excessive air pockets in which the texture of the flesh is noticeably different from the flesh of mature prunes which have been properly dried, handled, and processed. "Excessive air pockets" means that the prunes are affected by air pockets to the extent that the appearance and eating quality is seriously affected.

(c) *End cracks.* "End cracks" means callous apex-end cracks which, singly or in the aggregate on a prune, are more than ⅜ inch in length but not more than ½ inch in length.

(d) *Skin or flesh damage.* "Skin or flesh damage" in the case of "Whole Unpitted" style means:

(1) Callous growth cracks (other than callous apex-end cracks) which, singly or in the aggregate on a prune, exceed ⅜ inch in length; and callous apex-end cracks which, singly or in the aggregate on a prune, exceed ½ inch in length.

(2) Splits or skin breaks not having callous edges when the flesh is mashed out beyond the protecting skin so as to affect materially the normal appearance of the prune;

(3) Any cracks, splits, or skin breaks open to the pit;

(4) Any skin damage from multiple short skin breaks giving a very "rough" appearance to the prune such as may result from over-dipping, rain damage, processing, or other causes which in Type I dried prunes affect materially the appearance or edibility of the prune, or which in other types or other mixtures affect markedly the appearance or edibility of the prune.

(e) *Fermentation.* "Fermentation" means that the prune is fermented as evidenced by a distinct sour taste or odor or by darkening in color characteristic of fermentation or souring.

(f) *Scars.* "Scars" mean:

(1) Tough or thick scab which, singly or in combination on a prune, exceeds the area of a circle ⅜ inch in diameter such as may result from thrip injury, mildew, leaf chafing, limb rubs, or other means; or

(2) Scab which is not tough or thick and which, singly or in combination on a prune, exceeds the area of a circle ¾ inch in diameter and which is inconsequential but unsightly though practically blending in color with the skin on the portion of the prune not affected.

(g) *Heat damage.* "Heat damage" means burning or scorching from the sun or in dehydration so as to damage materially the skin or flesh, or both, of the prune.

(h) *Insect injury.* "Insect injury" means healed or unhealed surface blemishes and healed or unhealed blemishes extending into the flesh which affect materially the appearance, edibility, or keeping quality of the prune but which do not possess evidence of insect infestation.

(i) *Other means.* "Other means" includes damage by any injury or defect or group of defects not specifically mentioned in this section which materially affects the appearance, edibility, or keeping quality of the fruit, but "other means" does not include defects of a nature such as defined in paragraph (j), (k), (l), (m), or (n) of this section.

(j) *Mold.* "Mold" means a characteristic fungus growth as evidenced by a moldy or smutty condition and which, singly or in the aggregate on a prune, is equal to or exceeds the area of a circle 3/16 inch in diameter.

(k) *Dirt.* "Dirt" means the presence of any quantity of such substance, whether imbedded or adhering to the prune, which gives the prune a dirty, smudgy appearance and which may not be removed readily by washing.

(l) *Foreign material.* "Foreign material" means leaves, twigs, pieces of wood, and similar extraneous materials which are objectionable.

(m) *Insect infestation.* "Insect infestation" means the presence of dead insects, insect fragments, or insect remains. (No live insects are permitted).

(n) *Decay.* "Decay" means a state of decomposition, wholly or in part, of the prune.

[21 FR 8177, Oct. 25, 1956, as amended at 30 FR 11596, Sept. 10, 1965. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

WORK SHEET

§ 52.3188 Work sheet for dried prunes.

Size and kind of container ....

Container mark or identification ....

Label or brand ....

Varietal type ....

Style
Size:
Count per pound (Average)
Uniformity
( ) Extra large
( ) Large
( ) Medium
( ) Small
Moisture content percent; Uniformity
Varietal characteristics: ( ). Similar. ( ) Dissimilar.

Defects and summary of allowances [1]	Grade A maximum	Grade B maximum	Grade C maximum	Substandard maximum
Total of all defects, including off-color	10 percent	15 percent		No limit except as indicated below.
Total of all defects, including off-color and poor texture.			20 percent	
Poor texture, end cracks, skin or flesh damage,[3] fermentation, scars, heat damage, insect injury, other means, mold, dirt, foreign material, insect infestation, decay.	But no more than 6 percent.	But no more than 8 percent.		
End cracks,[2] skin or flesh damage,[3] fermentation, scars, heat damage, insect injury, other means, mold, dirt, foreign material, insect infestation, decay.			10 percent [2]	
Skin or flesh damage,[3] fermentation, scars, heat damage, insect injury, other means, mold, dirt, foreign material, insect infestation, decay.			But no more than 8 percent.	
Mold, dirt, foreign material, insect infestation, decay.	3 percent	4 percent	5 percent	5 percent.
Decay	But no more than 1 percent.	But no more than 1 percent.	But no more than 1 percent.	But no more than 1 percent.

Total
U.S. Grade (including all factors)

[1] Percentages of defects are "by weight."

[2] Except that each 1 percent of end cracks to, and including 8 percent, by weight, shall be considered as ½ percent damaged by end cracks; and any additional end cracks shall be calculated as true percentage, by weight.

[3] Allowances for "skin or flesh damage" apply only to "Whole Unpitted" style.

[21 FR 8177, Oct. 25, 1956, as amended at 30 FR 11596, Sept. 10, 1965. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Dehydrated, Low-Moisture Prunes

SOURCE: 25 FR 3705, Apr. 28, 1960, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, MOISTURE, STYLES, GRADES

§ 52.3231 Product description.

Dehydrated, low-moisture prunes, hereinafter referred to as "low-moisture prunes", are prepared from clean and sound fresh prune-plums or clean and sound previously dried prunes; are pitted and otherwise prepared into various sizes and shapes; are prepared to assure a clean, sound, wholesome product; are processed by dehydration hereby practically all of the moisture is removed to produce a very dry texture; and are packaged (including kind of container and proper closure) to assure retention of the low-moisture characteristics of the product.

§ 52.3232 Moisture of low-moisture prunes.

The moisture content of the finished product shall be not more than the following for the respective styles:

Nugget-type—2.5 percent.

Pieces—2.5 percent.
Whole Pitted—4.0 percent.

§ 52.3233 Styles of dehydrated prunes.

(a) *Nugget-type.* "Nugget-type" is especially processed to produce foam-textured units of irregular shapes of such size that practically all of the units will pass through 0.625 inch (⅝-inch) square openings.

(b) *Pieces.* "Pieces" consist of irregularly shaped cut or chopped pieces of such size that practically all of the units will pass through 0.625 inch (⅝-inch) square openings.

(c) *Whole pitted.* "Whole pitted" dehydrated prunes are substantially whole units except for mechanical marking or damage from pitting.

§ 52.3234 Grades of low-moisture prunes.

(a) "U.S. Grade A" or ("U.S. Fancy") low-moisture prunes is the quality of low-moisture prunes that possess a normal flavor and odor, that possess a good color, that are reasonably uniform in size and count for the applicable style, that are practically free from defects, that possess a good texture; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points: *Provided,* That the low-moisture prunes may possess a reasonably good texture, if the total score is not less than 85 points.

(b) "U.S. Grade B" (or "U.S. Choice") low-moisture prunes is the quality of low-moisture prunes that possess a normal flavor and odor, that possess a reasonably good color, that are fairly uniform in size and count for the applicable style, that are reasonably free from defects, that possess a reasonably good texture; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(c) "Substandard" low-moisture prunes is the quality of low-moisture prunes that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.3235 Ascertaining the grade.

In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(a) *Factors not rated by score points.* (1) Flavor and odor.

(b) *Factors rated by score points.* (1) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
(i) Color	20
(ii) Uniformity of size and count	20
(iii) Absence of defects	40
(iv) Texture	20
Total score	100

(2) The factors of flavor and odor, color, certain defects as may be applicable, and texture are ascertained upon the low-moisture prunes and the cooked product as specified in this subpart.

(c) *Flavor and odor.* "Normal flavor and odor" means that the low-moisture prunes and the cooked product possess a characteristic flavor and odor that is free from objectionable flavors (including definite scorched flavor) or objectionable odors of any kind.

§ 52.3236 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.3237 Color.

(a) (*A*) *classification.* Low-moisture prunes that possess a good color may be given a score of 17 to 20 points. "Good color" means that in the style of "nugget-type" the color may range from characteristic light chocolate brown to darker brown but the overall color impression is reasonably uniform; and that in the style of "pieces" or "whole pitted", the units may vary from characteristic blue-black typical of the exterior skin color, and chocolate brown to darker brown typical of the interior color, of low-moisture prunes; and that such characteristic color of any style, after cooking, is a reasonably rich color typical of cooked low-moisture prunes that have been properly prepared and processed.

(b) (*B*) *classification.* If the low-moisture prunes possess a reasonably good color, a score of 14 to 16 points may be given. Low-moisture prunes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that in the style of "nugget-type" the color may vary noticeably in shades of brown color; and that in the style of "pieces" or "whole pitted", the units may possess a variable dull blue-black to very dark brown color; and that in any style, after cooking, the color may be dull but is typical of cooked low-moisture prunes that have been properly prepared and processed and is not off-color for any reason.

(c) (*SStd*) *classification.* Low-moisture prunes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3238 Uniformity of size and count.

(a) (*A*) *classification.* Low-moisture prunes that are reasonably uniform in size and count may be given a score of 17 to 20 points. "Reasonably uniform in size and count" has the following meanings for the applicable style:

(1) *Nugget-type; pieces.* Practically all of the units are of such size and shape as to pass through 0.625 (⅝-inch) square openings and not more than 10 percent, by weight, of the low-moisture prunes may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(2) *Whole pitted.* Not more than 3 percent, by weight, of the low-moisture prunes may consist of small pieces that pass through meshes of a U.S. Standard No. 4 sieve (0.187-inch, ±3 percent, square openings); and the count of full-size units (after removal of small pieces and partial or inseparable units) is not more than 133 per pound; and the uniformity of count is such that in a sample of 100 ounces of full-size units:

(i) For prunes that average 83 prunes or less per pound, the count per pound of 10 ounces of the smallest prunes does not vary from the count per pound of 10 ounces of the largest prunes by more than 39 points; or

(ii) For prunes that average 84 prunes or more per pound, the count per pound of 10 ounces of the smallest prunes does not vary from the count per pound of 10 ounces of the largest prunes by more than 70 points.

(b) (*B*) *classification.* If the low-moisture prunes are fairly uniform in size and count, a score of 14 to 16 points may be given. Dehydrated prunes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size and count" has the following meanings for the applicable style:

(1) *Nugget-type; pieces.* Practically all of the units are of such size and shape as to pass through 0.625 (⅝-inch) square openings and not more than 25 percent, by weight, of the low-moisture prunes may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(2) *Whole pitted.* Not more than 5 percent, by count, of the low-moisture prunes may consist of small pieces that pass through meshes of a U.S. Standard No. 4 sieve (0.187-inch, ±3 percent square openings); and the count of full-size units (after removal of small pieces and partial or inseparable units) is not more than 140 per pound; and the uniformity of count is such that in a sample of 100 ounces of full-size units:

(i) For prunes that average 83 prunes or less per pound, the count per pound of 10 ounces of the smallest prunes does not vary from the count per pound of 10 ounces of the largest prunes by more than 39 points; or

(ii) For prunes that average 84 prunes or more per pound, the count per pound of 10 ounces of the smallest prunes does not vary from the count per pound of 10 ounces of the largest prunes by more than 70 points.

(c) (*SStd*) *classification.* Low-moisture prunes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3239 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from damaged and seriously damaged units, from partial units and inseparable units in whole pitted style, from units affected by pit material in whole pitted style, and from other defects or injury that affect the appearance or eating quality of the units or product.

(b) *Definitions.* (1) "Damaged units" are units that possess defects which materially affect the appearance of the low-moisture prunes and are of such nature that they may or may not disappear upon cooking. Units that are mechanically damaged by pitting, or other preparation including smaller perforations, are not considered "damaged units." "Damaged units" include, but are not limited to, units that possess scars, blemishes, insect injury, or other similar abnormality.

(2) "Seriously damaged units" include units that are excessively darkened due to scorching or burning, that possess serious scars, serious blemishes, serious insect injury, or other serious abnormality, or which in any other way possess defects that seriously affect the appearance of the low-moisture prunes and that the damage is of such nature that it does not disappear upon cooking.

(3) "Partial units" in whole pitted style consist of portions of whole pitted low-moisture prunes which are less than three-fourths of an apparent whole pitted prune.

(4) "Inseparable units" in whole pitted style consist of five or more partial units and/or whole pitted prunes which are so stuck together that they may not be readily separated in the low-moisture prunes.

(5) "Slightly affected by pieces of pit" in whole pitted style means units that are affected by not more than two fragments of pit which individually are ¼ inch or less in their longest dimension.

(6) "Seriously affected by pieces of pit" in whole pitted style means:

(i) Units that have more than two fragments of pit which individually are smaller than ¼ inch or less in their longest dimension; and

(ii) Units that have a piece or pieces of pit, any of which are longer than ¼ inch in their longest dimension.

(c) (*A*) *classification.* Low-moisture prunes that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the low-moisture prunes in any style are practically free from any defects that affect more than slightly the appearance or eating quality either in the low-moisture prunes or after cooking; and in whole pitted style there may be present not more than the following:

(1) *Whole pitted.* (i) A total of 5 percent, by weight, of the low-moisture prunes may be damaged: *Provided,* That not more than 2 percent, by weight, of the low-moisture prunes may be seriously damaged;

(ii) 7½ percent, by weight, of the low-moisture prunes may be partial and inseparable units; and

(iii) A total of 5 percent, by weight, of the low-moisture prunes may be slightly and seriously affected by pieces of pit: *Provided,* That not more than 3 percent, by weight, may be affected by fragments which individually are ⅛ inch or more but no longer than ¼ inch in their longest dimension: *And provided further,* That not more than 1 percent, by weight, may be seriously affected by pieces of pit.

(d) (*B*) *classification.* If the low-moisture prunes are reasonably free from defects, a score of 28 to 33 points may be given. Low-moisture prunes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the low-moisture prunes in any style are reasonably free from any defects that affect materially the appearance or eating quality either in the low-moisture prunes or after cooking; and in whole pitted style there may be present not more than the following:

(1) *Whole pitted.* (i) A total of 10 percent, by weight, of the low-moisture prunes may be damaged: *Provided,* That not more than 4 percent, by weight, of the low-moisture prunes may be seriously damaged;

(ii) 15 percent, by weight, of the low-moisture prunes may be partial and inseparable units; and

(iii) A total of 8 percent, by weight, of the low-moisture prunes may be slightly and seriously affected by pieces of pit: *Provided,* That not more than 5 percent, by weight, may be affected by fragments which individually are ⅛ inch or more but no longer than ¼ inch in their longest dimension: *And provided further,* That not more than 2 percent, by weight, may be seriously affected by pieces of pit.

(e) (*SStd*) *classification.* Low-moisture prunes that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3240 Texture.

(a) (*A*) *classification.* Low-moisture prunes that possess a good texture may be given a score of 17 to 20 points. "Good texture" means with respect to the low-moisture prunes that the units may vary in texture from partially pliable to brittle but are otherwise reasonably uniform in texture; and, after cooking in accordance with the method outlined in this subpart, meet the following requirements for the applicable style:

(1) *Nugget-type.* The cooked mass has a reasonably uniform texture and finish that is coarse or grainy without practically any hard particles.

(2) *Pieces.* The cooked product is practically free from hard, firm, or tough units and there is no more than moderate disintegration except for small pieces that may have been present.

(3) *Whole pitted.* The cooked product is pratically free from hard or tough units and substantially retains the semblance of whole pitted prunes except for small pieces that may have been present.

(b) (*B*) *classification.* If the low-moisture prunes possess a reasonably good texture, a score of 14 to 16 points may be given. "Reasonably good texture" means with respect to the low-moisture prunes that the units may vary in texture from partially pliable to brittle and may lack uniformity of texture; and, after cooking in accordance with the method outlined in this subpart, meeting the following requirements for the applicable style:

(1) *Nugget-type.* The cooked mass has a fairly uniform texture and finish that may range from fine and grainy to coarse and grainy; and hard particles may be noticeable but not objectionable.

(2) *Pieces.* The cooked product is fairly free from hard, firm, or tough units and may disintegrate generally into a coarse, saucelike consistency.

(3) *Whole pitted.*The cooked product is fairly free from hard or tough units and may consist of ragged or broken larger pieces and whole pitted units intermingled with slight amount of mushiness from small pieces which may have been present.

(c) (*SStd*) *classification.* Low-moisture prunes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.3241 Explanations of methods and analyses.

(a) *Moisture method.* "Moisture" in low-moisture prunes is determined in accordance with the official method applicable to dried fruits as outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists" or in accordance with methods which produce equivalent results.

(b) *Cooking procedure*—(1) *General.* The cooking procedures that follow are not intended to be a recipe for purposes of food preparation but are for the purposes of ascertaining compliance with requirements for applicable quality factors as outlined in this subpart.

(2) *Method.* Add 50 grams of low-moisture prunes to 400 ml. of water in a pan of such size as to cover the prunes cover pan, bring to a boil, and simmer with only gentle and occasional stirring for the time specified for the respective styles:

(i) *Nugget-type; pieces.* Simmer for 15 minutes.

(ii) *Whole pitted.* Simmer for 20 minutes.

(c) *Screening method.* The technique for ascertaining compliance with the requirements for particles that pass through U.S. Standard No. 4 and No. 8 sieves is as follows:

(1) *Nugget-type; pieces.* (i) Place a 100-gram representative sample of low-moisture prunes on a U.S. Standard No. 8, 8-inch diameter, full-height sieve to which a bottom pan has been attached;

(ii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches in a straight line and return to its original position repeating the movement 20 times;

(iii) Weigh the fine material sifted through to the bottom pan and, on the basis of the original sample, calculate the percentage which passed through the No. 8 sieve.

(2) *Whole pitted.* (i) From a 100-gram representative sample of low-moisture whole pitted prunes, remove all definitely whole pitted prunes, large pieces thereof, or inseparable units, and place the remaining smaller pieces on a U.S. Standard No. 4, 8-inch diameter, full-height sieve to which a bottom pan has been attached;

(ii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches in a straight line and return to its original position, repeating the movement 10 times;

(iii) Weigh the fine material sifted through to the bottom pan and, on the basis of the original sample, calculate the percentage which passed through the No. 4 sieve.

LOT INSPECTION AND CERTIFICATION

§ 52.3242 Ascertaining the grade of a lot.

The grade of a lot of low-moisture prunes covered by these standards is determined by the procedure set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.3243 Score sheet for low-moisture prunes.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight ....
Moisture content (percent) ....
Style ....
Count (whole pitted) per lb ....

Factors		Score points	
Color	20	(A)	17–20
		(B)	[1]14–16
		(SStd)	[1]0–13
Uniformity of size and count.	20	(A)	17–20
		(B)	[1]14–16
		(SStd)	[1]0–13
Absence of defects.	40	(A)	34–40
		(B)	[1]28–33
		(SStd)	[1]0–27
Texture	20	(A)	17–20
		(B)	14–16
		(SStd)	[1]0–13
Total score	100		

Flavor and odor ( ) Normal ( ) Off ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Hominy

SOURCE: 23 FR 783, Feb. 6, 1958, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Product Description, Color, Styles, and Grades

§ 52.3281 Product description.

"Canned hominy" means the canned product prepared from clean, sound field corn, either white or golden (yellow), by removal of the pericarp, by precooking or other processing, soaking, and sorting. The product is packed in a liquid packing medium or in a jelled packing medium, in accordance with good commercial practice, and is sufficiently processed by heat to assure preservation in hermetically sealed containers.

§ 52.3282 Color of canned hominy.

(a) White.

(b) Golden (yellow).

§ 52.3283 Styles of canned hominy.

(a) "Style I Whole" means canned whole kernel hominy which has been prepared from whole kernels of white or yellow field corn and is packed in a liquid packing medium. "Vacuum pack" canned whole kernel hominy means whole kernel hominy packed in not more than 20 percent, by weight, of liquid packing medium and the container is closed under conditions creating a high vacuum.

(b) "Style II Grits" means canned hominy which has been prepared from coarse kernel particles of white or yellow field corn from which the pericarp and germ have been removed and is packed in a liquid packing medium. "Vacuum pack" canned hominy grits means hominy grits packed in not more than 20 percent, by weight, of liquid packing medium and the container is closed under conditions creating a high vacuum.

(c) "Style III Grits, Jelled Pack" means canned hominy which has been prepared from coarse kernel particles of white or yellow field corn from which the pericarp and germ have been removed and is packed in a jelled packing medium.

§ 52.3284 Grades of canned hominy.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned hominy that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a good color; that is practically free from defects; that possesses a good character; that with respect to Style I Whole and Style II Grits possesses a good liquor; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points: *Provided* That Style I may be fairly free from defects with respect to crushed or broken kernels and Style I and Style II may possess a fairly good liquor, if the total score is not less than 85 points.

(b) "U.S. Grade C" (or "U.S. Standard") is the quality of canned hominy that possesses similar varietal characteristics; that possess a normal flavor that possesses a fairly good color; that is fairly free from defects; that possesses a fairly good character; that with respect to Style I and Style II possesses a fairly good liquor; and that scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned hominy that fails to meet the requirements of U.S. Grade C.

Fill of Container and Drained Weights

§ 52.3285 Recommended fill of container.

The recommended fill of container for canned hominy is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned hominy be filled as full as practicable with hominy without impairment of quality.

§ 52.3286 Recommended minimum drained weight.

The minimum drained weight recommendations in Table No. 1 of this section are not incorporated in the grades of the finished product, since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned hominy is determined by emptying the contents of the container upon a United States Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve to facilitate drainage, and allow to drain for two minutes. The drained weight is the weight of the sieve and the hominy less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2½ size can (401 × 411) and smaller sizes and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

TABLE 1—RECOMMENDED MINIMUM DRAINED WEIGHT (IN OUNCES) OF HOMINY STYLES NO. I AND NO. II

Container size or designation	Dimensions (inches) or water capacity (fluid ounces)	Drained weight (ounces)	
		Style I	Style II
No. 1 (picnic)	2 11/16x4	6⅓	7¾
No. 1 (tall)	3 11/16x4 11/16	9¾	11¾
No. 300	3x4 7/16	9	10¾
No. 303	3 3/16x4 6/16	10	12
No. 303 jar	17.0	10½	12½
No. 2	3 7/16x4 9/16	12	14¼
No. 2½	4 1/16x4 11/16	18	21¼
No. 2½ jar	28.3	17¼	21
No. 10	6 3/16x7	72	76

§ 52.3287 Compliance with recommended minimum drained weights.

Compliance with the recommended minimum drained weight for canned hominy is determined by averaging the drained weights of all of the containers which are representative of a specific lot. Such lot is considered as meeting recommendations, if:

(a) At least one-half of the containers meets the recommended minimum drained weight;

(b) The drained weights of the containers which do not meet the recommended minimum drained weight are within the range of variability of good commercial practice; and

(c) The average drained weight of all of the containers which are representative of the lot does not fall below the minimum recommended drained weight.

FACTORS OF QUALITY

§ 52.3288 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Liquor	10
Color	30
Defects	30
Character	30
Total score	100

(b) *Normal flavor.* "Normal flavor" means that the product has a characteristic normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

§ 52.3289 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is rated by score points are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each such factor is inclusive (for example, "25 to 30 points" means 25, 26 27, 28, 29, or 30 points).

§ 52.3290 Liquor.

(a) *General.* The factor of liquor is not scored in Style III Grits, Jelled Pack. The other three factors shall be scored and the total score shall be multiplied by 100 and divided by 90, dropping any fractions, to determine the total score for the product.

(b) (*A*) *classification.* Canned hominy that possesses a good liquor may be given a score of 9 or 10 points. "Good liquor" means that the liquor is light in color, may be slightly cloudy or slightly opaque, and may be slightly viscous but is reasonably free from starchy globules and sediment.

(c) (*C*) *classification.* If the canned hominy possesses a fairly good liquor, a score of 7 or 8 points may be given. "Fairly good liquor" means that the liquor may be definitely cloudy or opaque and viscous but not jelled, and is fairly free from starchy globules and sediment.

(d) (*SStd.*) *classification.* Canned hominy that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 6 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3291 Color.

(a) (*A*) *classification.* Canned hominy that possesses a good color may be given a score of 25 to 30 points. "Good color" means that the kernels possess a practically uniform, bright color typical of white or golden (yellow) hominy, as the case may be, and that the product contains not more than 2 percent, by count, of "off-variety" kernels or pieces of kernels.

(b) (*C*) *classification.* If the canned hominy possesses a fairly good color, a score of 21 to 24 points may be given. Canned hominy that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the kernels or pieces of kernels may possess a fairly uniform, typical color and may be slightly dull, and that the product contains not more than 3 percent, by count, of "off-variety" kernels or pieces of kernels.

(c) (*SStd.*) *classification.* Canned hominy that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.3292 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous material, from kernels or pieces of kernels with pericarp attached, from broken kernels in Style I, and from damaged and seriously damaged kernels or pieces of kernels.

(1) "Harmless extraneous materials means vegetable material such as pieces of cob, hulls, and loose germs.

(2) "Damage" means kernels or pieces of kernels damaged by discoloration, insect injury, pathological injury, or damaged by other means to the extent that the appearance or eating quality is materially affected.

(3) "Serious damage" means kernels or pieces of kernels damaged to such an extent that the appearance or eating quality is seriously affected.

(b) (*A*) *classification.* Canned hominy that is practically free from defects may be given a score of 25 to 30 points "Practically free from defects" means that the product is practically free from harmless extraneous material, from kernels or pieces of kernels with pericarp attached, and that not more than 2 percent, by weight, of the kernels or pieces of kernels may be damaged and seriously damaged, and of such 2 percent, not more than one-fourth thereof or one-half of 1 percent may be seriously damaged, and with respect to Style I not more than 10 percent, by count, of the kernels may be broken: *Provided,* That the aforesaid defects, individually or collectively, do not more than slightly affect the appearance or eating quality of the product.

(c) (*C*) *classification.* If the canned hominy is fairly free from defects, a score of 21 to 24 points may be given. Canned hominy that scores in this classification except for broken kernels in Style I, shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a partial limiting rule). "Fairly free from defects" means that the product is fairly free from harmless extraneous material, from kernels or pieces of kernels with pericarp attached, and that not more than 3 percent, by weight, of the kernels or pieces of kernels may be damaged and seriously damaged, and of such 3 percent not more than one-third thereof or 1 percent may be seriously damaged, and with respect to Style I not more than 20 percent, by count, of the kernels may be broken: *Provided,* That the aforesaid defects, individually or collectively, do not seriously affect the appearance or eating quality of the product.

(d) (*SStd.*) *classification.* Canned hominy that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3293 Character.

(a) *General.* The factor of character refers to the tenderness of the product and freedom from hard or excessively soft kernels or pieces of kernels.

(b) (*A*) *classification.* Canned hominy that possesses a good character may be given a score of 26 to 30 points. "Good character" means that the kernels or pieces of kernels may be reasonably firm and tender, and reasonably free from hard kernels and from excessively soft kernels or pieces of kernels.

(c) (*C*) *classification.* If the canned hominy possesses a fairly good character, a score of 21 to 25 points may be given. Canned hominy that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the kernels or pieces of kernels may be fairly firm and tender and fairly free from hard kernels and excessively soft kernels or pieces of kernels.

(d) (*SStd.*) *classification.* Canned hominy that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3294 Ascertaining the grade of a lot.

The grade of a lot of canned hominy covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3295 Score sheet for canned hominy.

Size and kind of container ....

Container marks or identification ....

Label ....

Net weight (ounces) ....

Vacuum (inches) ....

Drained weight (ounces) ....

Color—White; Golden (yellow) ....

Style ....

Factors		Score points	
Liquor	10	(A)	9-10
		(C)	7-8
		(SStd.)	[1] 0-6
Color	30	(A)	25-30
		(C)	[1] 21-24
		(SStd.)	[1] 0-20
Defects	30	(A)	25-30
		(C)	[2] 21-24
		(SStd.)	[1] 0-20
Character	30	(A)	26-30
		(C)	[1] 21-25
		(SStd.)	[1] 0-20
Total score	100		

Flavor ....

Varietal characteristics ....

Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Raspberries

SOURCE: 23 FR 125, Jan. 8, 1958, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, COLOR TYPES, AND GRADES

§ 52.3311 Product description.

Canned raspberries is the product represented as defined in the Standards of Identity (21 CFR 145.120) for canned berries issued pursuant to the Federal Food, Drug, and Cosmetic Act.

[41 FR 15021, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3312 Color types.

(a) Red (such as the New Washington, Latham, and Lloyd George varieties).

(b) Reddish purple (such as the Columbian and Sodus varieties).

(c) Black (such as the Logan and Cumberland varieties).

§ 52.3313 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned raspberries that possess similar varietal characteristics; that possess a normal flavor; that possess a good color; that (except for canned black raspberries) are practically uniform in size; that are practically free from defects; that possess a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 90 points: *Provided*, That canned red and reddish purple raspberries may be only reasonably uniform in size, if the total score is not less than 90 points.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of canned raspberries that possess similar varietal characteristics; that possess a normal flavor; that possess a reasonably good color; that (except for canned black raspberries) are reasonably uniform in size; that are reasonably free from defects; that possess a reasonably good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 80 points: *Provided*, That canned red and reddish purple raspberries may be only fairly uniform in size, if the total score is not less than 80 points.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of canned raspberries that possess similar varietal characteristics; that possess a normal flavor, that possess a fairly good color; that (except for canned black raspberries) are fairly uniform in size; that are fairly free from defects; that possess a fairly good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided*, That canned red and reddish purple raspberries may vary in uniformity of size, if the total score is not less than 70 points.

(d) "Substandard" is the quality of canned raspberries that fails to meet the requirements of U.S. Grade C or U.S. Standard.

LIQUID MEDIA, FILL OF CONTAINER, AND DRAINED WEIGHTS

§ 52.3314 Liquid media and Brix measurements.

(a) Brix measurement requirements for the liquid media in canned raspberries are not incorporated in the grades of the finished product since sirup, or any other liquid medium, as such, is not a factor of quality for the purpose of these grades. The designations of liquid packing media and Brix measurements, where applicable, are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s)".	27° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)".	20° or more but less than 27°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)".	15° or more but less than 20°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)".	11° or more but less than 15°.
"In water"	Not applicable.
"In fruit juice(s) and water"	Do.
"In fruit juice(s)"	Do.

[41 FR 15021, Apr. 9, 1976, as amended at 41 FR 18673, May 6, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3315 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of canned raspberries be filled with raspberries as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.3316 Recommended minimum drained weights.

(a) *General.* The minimum drained weigh recommendations for canned raspberries in Table I are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED RASPBERRIES

Container designations (metal unless otherwise stated)	Container size, overall dimensions (inches)		In syrup; artifically sweetened packing media; water (grades A and B) (ounces)		In water, grades C and SStd (ounces)	
	Width	Height	Red and purple	Black	Red and purple	Black
8 oz. Tall	2 11/16	3 4/16	4	5	4¼	5¼
No. 300	3	4 7/16	7	7	7¼	7¼
No. 1 Tall	3 1/16	4 11/16	8	8	8¼	8¼
No. 303	3 3/16	4 6/16	8	8	8¼	8¼
No. 2	3 7/16	4 9/16	10	10	10¼	10¼
No. 2½	4 1/16	4 11/16	14⅛	14¼	14½	14½
No. 10	6 3/16	7	53	55	60	65

(b) *Method for ascertaining drained weight.* The drained weight is determined by emptying the contents of the container upon a United States Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch ±3%, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for two minutes. The drained weight is the weight of the sieve and raspberries less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 × 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Compliance with recommended drained weights.* Compliance with the recommended drained weights is determined by averaging the drained weight from all the containers which are representative of a specific lot and such lot is considered as meeting the recommendations if the following criteria are met:

(1) The average of the drained weights from all of the containers meets the recommended drained weight;

(2) One-half or more of the containers meet the recommended drained weight; and

(3) The drained weights from the containers which do not meet the recommended drained weight are within the range of variability for good commercial practice.

FACTORS OF QUALITY

§ 52.3317 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	30
Uniformity of size	10
Defects	30
Character	30
Total score	100

(b) *Definition of flavor.* (1) "Normal flavor" means that the canned raspberries are free from objectionable flavors and objectionable odors of any kind.

§ 52.3318 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.3319 Color.

(a) *General.* The factor of color refers to the color typical of the varietal group and to the intensity and brightness of such color.

(b) (*A*) *classification.* Canned raspberries that possess a good color may be given a score of 27 to 30 points. "Good color" means that the canned raspberries possess a bright and typical color of well-ripened raspberries for the varietal type that have been properly processed and are practically uniform in that not more than 5 percent, by weight, of the drained raspberries may vary markedly from this typical color.

(c) (*B*) *classification.* Canned raspberries that possess a reasonably good color may be given a score of 24 to 26 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score of the product (this is a limiting rule). "Reasonably good color" means that the canned raspberries possess a reasonably bright and typical color of reasonably well-ripened raspberries for the varietal type that have been properly processed and are reasonably uniform in that not more than 15 percent, by weight, of the drained raspberries may vary markedly from this typical color.

(d) (*C*) *classification.* Canned raspberries that possess a fairly good color may be given a score of 21 to 23 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard regardless of the total score of the product (this is a limiting rule). "Fairly good color" means that the canned raspberries possess a color typical of fairly well-ripened raspberries for the varietal type that have been properly processed and which color may be variable but not off-color.

(e) (*SStd.*) *classification.* Canned raspberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3320 Uniformity of size.

(a) *General.* The factor of uniformity of size refers to the uniformity of the diameters and to the minimum size of the canned red and reddish purple raspberries. The factor of uniformity of size of canned black raspberries is not scored but the other three factors (color, defects, and character, as applicable) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(1) "Diameter" of a raspberry is determined by measuring at the widest point across the face of the "cup" of the whole raspberry.

(b) (*A*) *classification.* Canned raspberries that are practically uniform in size may be given a score of 9 or 10 points. "Practically uniform in size" means that the variation in size of the raspberries does not materially affect the appearance of the product and that not more than 10 percent, by weight, of the drained raspberries may be less than 9/16 inch in diameter.

(c) (*B*) *classification.* Canned raspberries that are reasonably uniform in size may be given a score of 8 points. "Reasonably uniform in size" means that the variation in size does not materially affect the appearance of the product and that not more than 15 percent, by weight, of the drained raspberries may be less than ½ inch in diameter.

(d) (*C*) *classification.* Canned raspberries that are fairly uniform in size may be given a score of 7 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a partial limiting rule). "Fairly uniform in size" means that the canned raspberries may be variable in size and that not more than 25 percent, by weight, of the drained raspberries may be less than 7/16 inch in diameter.

(e) (*SStd.*) *classification.* Canned raspberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 6 points and shall not be graded above U.S. Grade C of U.S. Standard, regardless of the total score of the product (this is a partial limiting rule).

§ 52.3321 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous material, undeveloped berries, damaged berries, and any other defects not specifically mentioned that affect the appearance or edibility of the product.

(1) "Harmless extraneous material" means substances such as leaves, caps, and stems that are harmless.

(i) "Cap" means a loose or attached full cap or portion of a cap to which at least one sepal-like bract or a portion thereof is attached.

(ii) "Stem" means a loose or attached stem that is longer than ¼ inch.

(2) "Undeveloped berry" means a raspberry or a portion thereof that is shriveled or in which more than one-fourth of the raspberry possesses hard or undeveloped drupelets or that possesses deformed areas which materially affect either the appearance or the eating quality of the raspberry.

(3) "Damaged berry" means a raspberry or a portion thereof that is damaged by pathological, insect, or other injury which materially affects either the appearance or the eating quality of the raspberry.

(b) (*A*) *classification.* Canned raspberries that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that:

(1) The presence of harmless extraneous material does not more than slightly affect the appearance or edibility of the product;

(2) Not more than 5 percent, by weight, of the drained raspberries may be undeveloped berries and damaged berries; and

(3) The presence of harmless extraneous material, undeveloped berries and any other defects not specifically, mentioned, individually and collectively, does not more than slightly affect the appearance or eating quality of the product.

(c) (*B*) *classification.* Canned raspberries that are reasonably free from defects may be given a score of 24 to 26 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) The presence of harmless extraneous material does not materially affect the appearance or edibility of the product;

(2) Not more than 10 percent, by weight, of the drained raspberries may be undeveloped berries and damaged berries, and

(3) The presence of harmless extraneous material, undeveloped berries, damaged berries, and any other defects not specifically mentioned, individually and collectively, does not materially affect the appearance or eating quality of the product.

(d) (*C*) *classification.* Canned raspberries that are fairly free from defects may be given a score of 21 to 23 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that:

(1) The presence of harmless extraneous material does not seriously affect the appearance or edibility of the product;

(2) Not more than 20 percent, by weight, of the drained raspberries are undeveloped berries and damaged berries; and

(3) The presence of harmless extraneous material, undeveloped berries, damaged berries, and any other defects not specifically mentioned, individually and collectively, does not seriously affect the appearance or eating quality of the product.

(e) (*SStd.*) *classification.* Canned raspberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3322 Character.

(a) *General.* The factor of character refers to the degree of ripeness and fleshiness of the canned raspberries and the degree of freedom from detached drupelets and broken or mashed berries.

(1) "Broken or mashed berry" means that the raspberry has more than 50 percent of the drupelets crushed, broken, or detached, or is damaged by other means to the extent that the original conformation of the berry is destroyed.

(b) (*A*) *classification.* Canned raspberries that possess a good character may be given a score of 27 to 30 points. "Good character" means that:

(1) The raspberries are thick fleshed and well ripened;

(2) The presence of detached drupelets does not more than slightly affect the appearance of the product; and

(3) Not more than 10 percent, by weight, of the drained raspberries may be broken or mashed.

(c) (*B*) *classification.* Canned raspberries that possess a reasonably good character may be given a score of 24 to 26 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that:

(1) The raspberries are reasonably thick fleshed and reasonably well ripened;

(2) The presence of detached drupelets does not materially affect the appearance of the product; and

(3) Not more than 15 percent, by weight, of the drained raspberries may be broken or mashed.

(d) (*C*) *classification.* Canned raspberries that possess a fairly good character may be given a score of 21 to 23 points. Canned raspberries that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that:

(1) The raspberries are fairly thick fleshed and fairly well ripened;

(2) The presence of detached drupelets does not seriously affect the appearance of the product; and

(3) Not more than 20 percent, by weight, of the drained raspberries may be broken or mashed berries.

(e) (*SStd.*) *classification.* Canned raspberries that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3323 Ascertaining the grade of a lot.

The grade of a lot of canned raspberries covered by this subpart is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits, Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3324 Score sheet for canned raspberries.

Number, size and kind of container ....
Label ....
Container mark or identification ....
Net weight (ounces) ....
Vacuum ....
Drained weight (ounces) ....
Brix measurement ....
Syrup designation ....
Color type ....

Factors		Score points	
Color	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Uniformity of size.	10	(A)	9–10
		(B)	8
		(C)	[2] 7
		(SStd.)	[2] 0–6
Defects	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Character	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Total score	100		

Flavor ( ) normal ( ) off-flavor ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Okra

SOURCE: 22 FR 4012, June 7, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.3331 Product description.

Canned okra is the product prepared from clean, sound, succulent, immature pods of either the green or white varieties of the okra plant, which are properly trimmed and sorted; which may or may not have undergone partial fermentation; and is washed, packed, and processed in accordance with good commercial practice which includes such product as defined in the standard of identity for canned okra (21 CFR 155.200) issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.3332 Types of canned okra.

(a) *Type I canned okra.* Canned okra of this type has been partially fermented in a salt brine before processing.

(b) *Type II canned okra.* Canned okra of this type has not been fermented before processing.

§ 52.3333 Styles of canned okra.

(a) "Whole" means canned okra consisting of whole pods with stems removed and with or without the caps removed.

(b) "Whole salad" means canned okra consisting of whole pods with stems attached which are at least one-half inch but not exceeding one inch in length.

(c) "Cut" means canned okra consisting of pods with the caps and stems removed, which have been cut transversely into pieces.

§ 52.3334 Grades of canned okra.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned okra that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a good color; that is practically uniform in size; that is practically free from defects; that possesses a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 85 points.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned okra that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a fairly good color; that is fairly uniform in size; that is fairly free from defects; that possesses a fairly good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided,* That the canned okra may be variable in size if the total score is not less than 70 points.

(c) "Substandard" is the quality of canned okra that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.3335 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned okra be filled with okra as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.3336 Drained weights.

(a) *General.* The minimum drained weight recommendations for canned okra in Table No. I of this section are not incorporated in the grades of the finished product since drained weight as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining a drained weight.* The drained weight is determined by emptying the contents of the container upon a United States Standard No. 8 sieve of proper diameter so as to distribute the product evenly inclining the sieve to facilitate drainage, and allow the product to drain for two minutes. The drained weight is the weight of the sieve and the drained product less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 3 size can (404 x 414) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Compliance with recommended drained weights.* Compliance with the recommended drained weights is determined by averaging the drained weight from all the containers which are representative of a specific lot and such lot is considered as meeting the recommendations if the following criteria are met:

(1) The average of the drained weights from all of the containers meets the recommended drained weight;

(2) One-half or more of the containers meets the recommended drained weight; and

(3) The drained weights from the containers which do not meet the recommended drained weight are within the range of variability for good commercial practice.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHT OF OKRA, IN OUNCES

Container size or designation	Container dimensions (inches)		Styles of canned okra	
	Width	Height	Whole or salad	Cut
8 oz. Tall	2 11/16	3 4/16	4.5	5
No. 1 Picnic	2 11/16	4	6.2	6.5
No. 1 Tall	3 1/16	4 11/16	9.8	10.2
No. 303	3 3/16	4 6/16	10	10.5
No. 2	3 7/16	4 9/16	12	12.8
No. 2½	4 1/16	4 11/16	17.8	18.8
No. 10	6 3/16	7	60	60

FACTORS OF QUALITY

§ 52.3337 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors is:

Factors	Points
Color	20
Size	10
Defects	35
Character	35
Total score	100

(b) *Normal flavor.* "Normal flavor" means that the product has a normal characteristic flavor and odor for the type and is free from objectionable flavors and objectionable odors of any kind.

§ 52.3338 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.3339 Color.

(a) (*A*) *classification.* Canned okra that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the outer surfaces of the okra pods possess a practically uniform color typical for the type and variety of young, tender, properly prepared, and properly processed canned okra.

(b) (*C*) *classification.* Canned okra that possesses a fairly good color may be given a score of 14 to 16 points. Canned okra that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the outer surfaces of the okra pods possess a fairly uniform color typical for the type and variety of fairly tender, properly prepared, and properly processed canned okra.

(c) (*SStd.*) *classification.* Canned okra that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3340 Size.

(a) (*A*) *classification.* Canned okra that is practically uniform in size may be given a score of 8 to 10 points. "Practically uniform in size" has the following meanings with respect to the following styles of canned okra:

(1) *Whole and whole salad.* (i) In 90 percent, by count, of the most uniform pods of okra, the length of the longest unit is not more than twice the length of the shortest unit, and that

(ii) The overall length of the unit does not exceed 3½ inches.

(2) *Cut.* The appearance of the product is not materially affected by the variation in the size of the units.

(b) (*C*) *classification.* Canned okra that is fairly uniform in size may be given a score of 7 points. Canned okra that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly uniform in size" has the following meanings for the following styles:

(1) *Whole and whole salad.* In 90 percent, by count, of the most uniform pods of okra, the length of the longest unit is not more than three times the length of the shortest unit.

(2) *Cut.* The appearance of the product is not seriously affected by the variation in the size of the units.

(c) (*SStd.*) *classification.* Canned okra that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 6 points and shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3341 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from extraneous vegetable matter, small pieces, poorly trimmed units, misshapen pods, and from damaged or seriously damaged units.

(1) "Extraneous vegetable matter" means any vegetable substance (including but not limited to a leaf, unattached stem, or portions thereof) that is harmless.

(2) "Small pieces" means pieces of canned okra less than ⅜ inch in length.

(3) "Poorly trimmed": (i) "With respect to whole style" means a unit that has an attached stem more than ¼ inch in length measured from the blossom scar.

(ii) "With respect to whole salad style" means a unit that has an attached stem less than ½ inch or more than 1 inch in length measured from the blossom scar.

(iii) "With respect to cut style" means a unit that is partially cut or possesses ragged edges or attached caps or portions thereof.

(4) "Misshapen units" means any unit in whole or whole salad styles that is malformed or crooked to the extent that the appearance or eating quality of the unit is seriously affected.

(5) "Damaged unit" means any pod or piece of pod affected by insect injury, pathological injury, mechanical injury, discoloration, or damaged by other means to the extent that the appearance or eating quality is materially affected.

(6) "Seriously damaged unit" means damaged to such an extent that the appearance or eating quality is seriously affected.

(b) (*A*) *classification.* Canned okra that is practically free from defects may be given a score of 30 to 35 points. "Practically free from defects" means that extraneous vegetable matter, small pieces of canned okra, poorly trimmed units, misshapen units, and damaged and seriously damaged units may be present for the applicable styles that do not materially affect the appearance and eating quality of the product.

(c) (*C*) *classification.* Canned okra that is fairly free from defects may be given a score of 25 to 29 points. Canned okra that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that extraneous vegetable matter, small pieces of canned okra, poorly trimmed units, misshapen units, and damaged or seriously damaged units may be present for the applicable styles that do not seriously affect the appearance and eating quality of the product.

(d) (*SStd.*) *classification.* Canned okra that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 24 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3342 Character.

(a) *General.* The factor of character refers to the degree of development of the pod, the freedom from fibrous material, and the tenderness and texture of the pod and the seed.

(b) (*A*) *classification.* Canned okra that possesses a good character may be given a score of 30 to 35 points. "Good character" means that the units are tender and practically free from fibrous material, which is objectionable upon eating, that the seeds are in the early stages of development, and that with respect to Type I canned okra the appearance of the product is not more than slightly affected by the presence of broken, crushed, or mashed units and with respect to Type II canned okra the appearance is not materially affected by the presence of crushed, broken, and mashed units.

(c) (*C*) *classification.* Canned okra that possesses a fairly good character may be given a score of 24 to 29 points. Canned okra that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the units may be fairly tender, that the seeds may have passed the early stages of development, and that the product contains not more than 0.20 percent, by weight, of dried cellulose material.

(d) (*SStd.*) *classification.* Canned okra that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

METHODS OF ANALYSIS

§ 52.3343 Percent, by weight, of fibrous material.

(a) Canned okra shall be tested by the following method to determine the percent, by weight, of fibrous material:

(1) Distribute the contents of the container over the meshes of a circular sieve which has been previously weighed. The diameter of the sieve is 8 inches if the quantity of the contents of the container is less than 3 pounds, and 12 inches if such quantity is 3 pounds or more. The bottom of the sieve is woven wire cloth which complies with the specifications for such cloth set forth under "2380 Micron (No. 8)" in Table I of "Standard Specifications for Sieves," published March 1, 1940, in L. C. 584 of the United States Department of Commerce, National Bureau of Standards. Without shifting the material on the sieve, so incline the sieve as to facilitate drainage. Two minutes from the time drainage begins, weigh the sieve and the drained material. Record, in ounces, the weight so found less the weight of the sieve as the drained weight.

(2)(i) Remove from the sieve one or more representative samples of 3½ to 4 ounces, covering each sample as taken to prevent evaporation. Transfer to the metal cup of a malted milk stirrer and mash with a pestle. Wash material adhering to the pestle back into cup with 200 cc. of boiling water. Bring mixture nearly to a boil, add 25 cc. of 50 percent (by weight) sodium hydroxide solution and bring to a boil. (If foaming is excessive, 1 cc. of capryl alcohol may be added.) Boil for 5 minutes, then stir for 5 minutes with a matled milk stirrer capable of a no-load speed of at least 7200 r.p.m. Use a rotor with two scalloped buttons shaped as shown in the diagram in Exhibit 1.

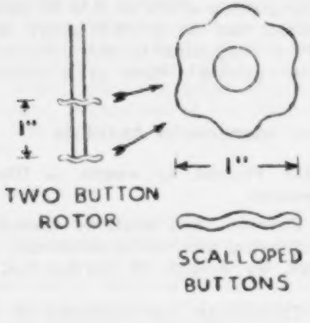


EXHIBIT 1

(ii) Transfer the material from the cup to a previously weighed 30-mesh monel metal screen having a diameter of about 3½ to 4 inches and side walls about 1 inch high, and wash fiber on the screen with a stream of water using a pressure not exceeding a head (vertical distance between upper level of water and outlet of glass tube) of 60 inches, delivered through a glass tube 3 inches long and ⅛ inch inside diameter inserted into a rubber tube of ¼ inch inside diameter. Wash the pulpy portion of the material through the screen and continue washing until the remaining fibrous material, moistened with phenolphthalein solution, does not show any red color after standing 5 minutes. Again wash to remove phenolphthalein Dry the screen containing the fibrous material for 2 hours at 100° C., cool, weight, and deduct weight of screen Divide the weight of fibrous material by the drained weight and multiply by 100 to obtain the percentage of fibrous material.

ASCERTAINING THE GRADE OF A LOT

§ 52.3344 Ascertaining the grade of a lot.

The grade of a lot of canned okra is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits, vegetables, processed products thereof and certain other processed food products (§§ 52.1 to 52.87 of this chapter).

SCORE SHEET

§ 52.3345 Score sheet.

Container size ....
Container code or marking ....
Label ....
Net weight (ounces) ....
Vacuum readings (inches) ....
Drained weight (ounces) ....
Type ....
Style ....
Count ....

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1]14-16
		(SStd.)	[1]0-13
Size	10	(A)	8-10
		(C)	[1]7
		(SStd.)	[2]0-6
Defects	35	(A)	30-35
		(C)	[1]25-29
		(SStd.)	[1]0-24
Character	35	(A)	30-35
		(C)	[1]24-29
		(SStd.)	[1]0-23
Total score	100		

Flavor ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Tomatoes and Okra and Canned Okra and Tomatoes

SOURCE: 22 FR 9379, Nov. 23, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, PROPORTION OF INGREDIENTS, AND GRADES

§ 52.3421 Product description.

Canned tomatoes and okra and canned okra and tomatoes, called canned tomatoes and okra in this subpart, is the product prepared from clean, sound, properly matured tomatoes of red or reddish varieties which may be canned, and the clean, sound, succulent, immature pods of either the green or white varieties of the okra plant which may be processed. The tomatoes have been prepared by trimming, washing, sorting, peeling, and coring. The okra is prepared by trimming, washing, and sorting, and may be whole or cut into pieces. The tomatoes and okra may be packed with or without a small amount of tomato juice or tomato puree and with or without such other ingredients permissible under the provisions of the Federal Food, Drug, and Cosmetic Act in accordance with good commercial practice. The product is sufficiently processed by heat to assure preservation in hermetically sealed containers.

§ 52.3422 Proportion of ingredients.

(a) Canned tomatoes and okra shall consist of 50 percent or more, by weight, of the tomato ingredient and not less than 12.5 percent nor more than 50 percent, by weight, of whole or cut okra.

(b) Canned okra and tomatoes shall consist of 50 percent or more, by weight, of whole or cut okra and not less than 12.5 percent nor more than 50 percent, by weight, of the tomato ingredient.

(c) Compliance with the requirement for proportions of ingredients will be determined by averaging the percent, by weight, of each ingredient in all of the containers in the sample: *Provided*, That any deviation from the prescribed proportion of ingredients in any one container is within the limits of good commercial practice.

§ 52.3423 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned tomatoes and okra that possess a good flavor; that possess a good color; that are practically free from defects; that possess a good character; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned tomatoes and okra that possess a fairly good flavor; that possess a fairly good color; that are fairly free from defects; that possess a fairly good character; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned tomatoes and okra that fail to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER

§ 52.3424 Fill of container.

The recommended fill of container for canned tomatoes and okra is not incorporated in the grades of the finished product since fill of the container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled as full of tomatoes and okra as practicable without impairment of quality and that the product shall fill the container to not less than 90 percent of its total capacity.

FACTORS OF QUALITY

§ 52.3425 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factor not rated by score points* (i) Proportion of ingredients.

(2) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	20
Flavor	20
Defects	30
Character	30
Total score	100

§ 52.3426 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "26 to 30 points" means 26, 27, 28, 29, or 30 points).

§ 52.3427 Color.

(a) (*A*) *classification.* Canned tomatoes and okra that possess a good color may be given a score of 17 to 20 points. "Good color" means that the tomato ingredient possesses a reasonably good red color that is typical of reasonably well ripened tomatoes and that the okra possesses the color of young tender okra, which ingredients have been properly prepared and properly processed and meet the following additional requirements:

(1) *Tomatoes.* Not less than 50 percent, by weight, of the drained tomato ingredient possesses as much or more red than USDA Tomato Red Color Standard: *Provided,* That the color of not more than 10 percent, by weight, of the remaining portion of the drained tomato ingredient may be yellow and none is green in color.

(2) *Okra.* The outer surface of the okra pods or pieces of pods possesses a color that is typical of young tender okra.

(b) (*C*) *classification.* Canned tomatoes and okra that possess a fairly good color may be given a score of 14 to 16 points. Canned tomatoes and okra that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the tomato ingredient possesses a fairly good red color typical of fairly well ripened tomatoes and that the okra possesses the color of reasonably tender okra, which ingredients have been properly prepared and properly processed.

(c) (*SStd.*) *classification.* Canned tomatoes and okra that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3428 Flavor.

(a) (*A*) *classification.* Canned tomatoes and okra that possess a good flavor may be given a score of 17 to 20 points. "Good flavor" means that the product has a characteristic flavor and odor typical of well ripened tomatoes and young tender okra.

(b) (*C*) *classification.* Canned tomatoes and okra that possess a fairly good flavor may be given a score of 14 to 16 points. Canned tomatoes and okra that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(c) (*SStd.*) *classification.* Canned tomatoes and okra that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3429 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from sand, grit, or silt; harmless extraneous material; tomato peel; tomato core material; small pieces of okra; and from damaged or seriously damaged tomato or okra ingredient.

(1) "Sand, grit, or silt" means any particle of earthy material.

(2) "Harmless extraneous material" means any extraneous vegetable substance (including, but not limited to, a leaf, unattached stem, or portions thereof) that is harmless.

(3) "Damaged" means that the appearance and eating quality of the product is materially affected by the presence of scarred, discolored, or blemished tomato ingredient and/or scarred, poorly trimmed okra ingredient, and small pieces of pod less than ⅜ inch in length, or other damage.

(4) "Seriously damaged" means that the appearance and eating quality of the product is seriously affected by the presence of damaged ingredients.

(b) (*A*) *classification.* Canned tomatoes and okra that are practically free from defects may be given a score of 25 to 30 points. "Practically free from defects" means that the presence of sand, grit, or silt; harmless extraneous material; tomato peel; core material; and damaged and seriously damage ingredients, individually or collectively, does not materially affect the appearance and eating quality of the product.

(c) *(C) classification.* Canned tomatoes and okra that are fairly free from defects may be given a score of 21 to 24 points. Canned tomatoes and okra that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule) "Fairly free from defects" means that the presence of sand, grit, or silt; harmless extraneous material; tomato peel; core material; and damaged and seriously damaged ingredients, individually or collectively, does not seriously affect the appearance and eating quality of the product.

(d) *(SStd.) classification.* Canned tomatoes and okra that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3430 Character.

(a) *General.* The factor of character refers to the texture and wholeness of the tomato ingredient and the tenderness and texture of the okra pods or pieces of pods.

(1) "Large piece of tomato ingredient" means a piece of tomato flesh that weighs not less than 1 ounce.

(2) "Small piece of tomato ingredient" means a piece of tomato flesh that weighs less than 1 ounce and that does not pass through a United States Standard ½-inch sieve.

(b) *(A) classification.* Canned tomatoes and okra that possess a good character may be given a score of 26 to 30 points. "Good character" means that the tomato ingredient is composed of whole, almost whole, or large pieces of tomato flesh and that the okra pods or pieces of pods are fleshy and tender and practically intact, that the okra seed is in the early stages of development, and that not more than 2 percent, by count, of the pods or pieces of pods may possess fibrous material which is materially objectionable upon eating.

(c) *(C) classification.* Canned tomatoes and okra that possess a fairly good character may be given a score of 21 to 25 points. Canned tomatoes and okra that fall into this classification on account of fibrous material shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a partial limiting rule). "Fairly good character" means that the tomato ingredient may be predominantly in small pieces and that the okra pods and pieces of pods may have lost to a considerable extent their fleshy texture, that the units may be fairly tender but not excessively mushy, that the seed may be in the later stages of maturity but are not hard, and that not more than 5 percent, by count, of the pods or pieces of pods may possess fibrous material which is materially objectionable upon eating.

(d) *(SStd.) classification.* Canned tomatoes and okra that fail to meet the requirements of paragraph (c) of this section with respect to fibrous material may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a partial limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3431 Ascertaining the grade of a lot.

The grade of a lot of canned tomatoes and okra covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.3432 Score sheet for canned tomatoes and okra and canned okra and tomatoes.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum readings (inches) ....
Proportion of ingredients, —% tomatoes, —% okra ....
Whole or cut okra ....

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1]14-16
		(SStd.)	[1]0-13

Flavor	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Defects	30	(A)	25-30
		(C)	[1] 21-24
		(SStd.)	[1] 0-20
Character	30	(A)	26-30
		(C)	[2] 21-25
		(SStd.)	[2] 0-20
Total score	100		
Grade			

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Bulk Sauerkraut

SOURCE: 32 FR 7568, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, GRADES

§ 52.3451 Product description.

Bulk or barreled sauerkraut, hereinafter referred to as "sauerkraut" or "bulk sauerkraut" is the product of characteristic acid flavor, obtained by the full fermentation, chiefly lactic, of properly prepared and shredded cabbage in the presence of not less than 2 percent nor more than 3 percent of salt. It contains, upon completion of the fermentation, not less than 1.5 percent of acid, expressed as lactic acid.

§ 52.3452 Grades of bulk sauerkraut.

(a) "U.S. Grade A (First Quality)" bulk sauerkraut is of a color approximating, or is lighter than "Olive Buff" (according to Ridgway's "Color Standards and Nomenclature"), with the shreds uniformly cut to approximately $1/32$-inch in thickness. The product is practically free from defects and blemishes; is of fine, crisp texture; possesses a normal, well developed, sauerkraut flavor; and scores not less than 85 points when scored according to the scoring system outlined herein.

(b) "U.S. Grade C (Second Quality)" bulk sauerkraut may have a variable straw color, but not darker than "Dark Olive Buff" (according to Ridgway's "Color Standards and Nomenclature"); the shreds may lack uniformity of thickness. The product is reasonably free from defects and blemishes; is of reasonably fine, crisp texture; possesses a normal sauerkraut flavor; and scores not less than 70 points and need not score more than 84 points when scored according to the scoring system outlined herein.

(c) "Substandard" bulk sauerkraut is sauerkraut that fails to meet the requirements of the foregoing grades or when any one of the grading factors falls in the (D) classification.

FACTORS OF QUALITY

§ 52.3453 Ascertaining the grade.

The grade of bulk sauerkraut may be ascertained by considering, in addition to the requirements in the definition, the following factors: Color, cut, absence of defects, texture, and flavor. The relative importance of each element has been expressed numerically on a scale of 100. The maximum number of credits that may be given for each factor is:

Factors	Points
Color	15
Cut	15
Absence of defects	10
Texture	15
Flavor	45
Total score	100

§ 52.3454 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical ranges within each factor are inclusive. For instance, the range 13 to 15 means 13, 14, and 15.

§ 52.3455 Color.

(a) *(A) classification.* Sauerkraut that possesses a color approximating, or is lighter than "Olive Buff" (according to Ridgway's "Color Standards and Nomenclature"), may be given a credit of 13 to 15 points.

(b) *(C) classification.* If the sauerkraut possesses a color ranging from "Olive Buff" to (but not darker than) "Dark Olive Buff", or is slightly greenish or yellowish, or possesses a tint of light brown, a credit of 10 to 12 points may be allowed. Sauerkraut that falls in this classification shall not be graded above U.S. Grade C (Second Quality), regardless of the total score for the product.

(c) (*D*) *classification.* If the sauerkraut possesses a decidedly dark, or pink tinted color, a credit within the range of zero to nine points may be allowed.

§ 52.3456 Cut.

(a) (*A*) *classification.* If the shreds of sauerkraut are uniformly cut to approximately $^1/_{32}$-inch in thickness and are of a reasonable length, a credit of 13 to 15 points may be allowed.

(b) (*C*) *classification.* If the cut is very irregular, the shreds being "choppy" and poorly cut, a credit of 10 to 12 points may be allowed. Sauerkraut that falls in this classification may not be graded above U.S. Grade C (Second Quality), regardless of the total score for the product.

(c) (*D*) *classification.* Sauerkraut that is very uneven in cut, containing decidedly thick or short shreds, may be given a credit of not more than nine points.

§ 52.3457 Absence of defects.

(a) *General.* The factor of absence of defects refers to defects such as large pieces of leaves, dead leaves, large pieces of core, spotted shreds, or other defects.

(b) (*A*) *classification.* Sauerkraut that is practically free from the defects mentioned may be given a credit of nine to 10 points.

(c) (*C*) *classification.* If the product is reasonably free from the defects mentioned, a credit of six to eight points may be allowed. Sauerkraut that falls in this classification shall not be graded above U.S. Grade C (Second Quality), regardless of the total score for the product.

(d) (*D*) *classification.* If pieces of dead leaves, large pieces of core, spotted shreds, or any similar blemishes are prominently present to the extent of injuring the appearance of the product, a credit within the range of zero to five points may be allowed.

§ 52.3458 Texture.

(a) *General.* The factor of texture refers to the condition of the product and the tendency of the shreds to be firm, fresh, crisp, and easy to cut, as contradistinguished to soft or mushy.

(b) (*A*) *classification.* Sauerkraut that is firm and crisp may be given a credit of 13 to 15 points.

(c) (*C*) *classification.* If the product is somewhat tough, or is slightly soft, a credit of 10 to 12 points may be allowed. Sauerkraut that falls in this classification shall not be graded above U.S. Grade C (Second Quality), regardless of the total score for the product.

(d) (*D*) *classification.* If the sauerkraut is tough, or contrariwise, is soft and mushy, a credit within the range of zero to nine points may be allowed.

§ 52.3459 Flavor.

(a) (*A*) *classification.* Sauerkraut that has a highly acid (expressed as lactic), palatable, clean, characteristic sauerkraut flavor, may be given a credit of 40 to 45 points.

(b) (*C*) *classification.* If the product possesses a good sauerkraut flavor that may be suggestive of improper bacterial action, but not markedly so, it may be given a credit of 34 to 39 points. Sauerkraut that falls in this classification shall not be graded above U.S. Grade C (Second Quality), regardless of the total score for the product.

(c) (*D*) *classification.* If the flavor is poor and unpalatable from any cause (acetic, butyric, yeasty, moldy, very salty, bitter stale, or rancid), a credit within the range of zero to 33 points may be allowed.

METHODS OF ANALYSIS

§ 52.3460 Determination of acidity.

The method of titration used to determine the degree of lactic acidity in sauerkraut is as follows: Place 10 cc. of sauerkraut juice in a flask, add 40 cc. of distilled water (hydrant water contains large quantities of alkaline salts which tend to neutralize the sauerkraut acid before titration takes place). Shake the flask to mix thoroughly the sauerkraut juice and water.

Add three or four drops of phenolphthalein solution. Into this mixture slowly run, drop by drop, from a burette graduated in ¹⁄₁₀ cc. and filled with ⅒ normal solution of sodium hydroxide, enough of the sodium hydroxide to bring a permanent pink tint to the sauerkraut juice solution shaking the flask as the sodium hydroxide is added. As soon as the pink tint becomes permanent (at first it will fade away), note the amount of the hydroxide used, divide this number by 10, and the result is a number which is the percentage of lactic acid in the sauerkraut juice.

LOT COMPLIANCE

§ 52.3461 Ascertaining the grade of a lot.

The grade of a lot of bulk sauerkraut covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.3462 Score sheet for bulk sauerkraut.

Identification marks on packages ....

Net weight as indicated on package ....

Percent acid ....

Factors		Points allowable	
Color	15	(A)	13-15
		(C)	[1] 10-12
		(D)	[2] 0-9
Cut	15	(A)	13-15
		(C)	[1] 10-12
		(D)	[2] 0-9
Absence of defects.	10	(A)	9-10
		(C)	[1] 6-8
		(D)	[2] 0-5
Texture	15	(A)	13-15
		(C)	[1] 10-12
		(D)	[2] 0-9
Flavor	45	(A)	40-45
		(C)	[1] 34-39
		(D)	[2] 0-33
Total score	100		

Grade ....

[1] Sauerkraut that falls in this classification may not be graded above U.S. Grade C (Second Quality).

[2] Sauerkraut that falls in this classification may not be graded above Substandard.

Subpart—United States Standards for Grades of Frozen Peas

SOURCE: 24 FR 3782, May 12, 1959; 24 FR 3986, May 16, 1959, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.3511 Product description.

"Frozen peas" means the frozen product prepared from the clean, sound, succulent seed of the common garden pea (Pisum sativum) by shelling, washing, blanching, sorting, proper draining, and is frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.3512 Grades of frozen peas.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen peas that possess similar varietal characteristics; that possess a good flavor; that possess a good color; that are practically free from defects; that are tender; and for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 90 points: *Provided*, That the frozen peas may possess a reasonably good color, scoring not less than 17 points and may be only reasonably free from defects with respect to pieces of peas if the total score is not less than 90 points.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen peas that possess similar varietal characteristics; that possess a fairly good flavor; that possess a reasonably good color; that are reasonably free from defects; that are reasonably tender, and for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 80 points: *Provided*, That the frozen peas may possess a fairly good color and may be fairly free from defects with respect to pieces of peas if the total score is not less than 80 points.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of frozen peas that possess similar varietal characteristics; that possess a fairly good flavor; that possess a fairly good color; that are fairly free from defects; that are fairly tender; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided*, That the frozen peas may fail to meet the requirements of this paragraph for defects with respect to pieces of peas if the total score is not less than 70 points.

(d) "Substandard" is the quality of frozen peas that fail to meet the requirements of U.S. Grade C.

FACTORS OF QUALITY

§ 52.3513 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given for each such factor is:

Factors	Points
Color	20
Defects	40
Tenderness and maturity	40
Total score	100

(b) *Evaluation of quality.* Flavor and the factor of tenderness and maturity is determined after the product has reached room temperature and after cooking. The rating for the factors of color and defects and the evaluation of similar varietal characteristics are determined immediately after the product has reached room temperature or may be determined immediately after thawing so that the product is free from ice crystals.

(c) *Definitions of requirements not rated by score points.* (1) "Good flavor" means that the product has a good characteristic flavor and odor for the maturity and is free from objectionable flavors and objectionable odors of any kind.

(2) "Fairly good flavor" means that the product may be lacking in good flavor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.3514 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "36 to 40 points" means 36, 37, 38, 39, or 40 points.)

§ 52.3515 Color.

(a) (*A*) *classification.* Frozen peas that possess a good color may be given a score of 18 to 20 points. "Good color" means that the frozen peas possess a bright, practically uniform, good, green color that is typical for the variety; that peas which vary markedly from such typical green color do not more than slightly affect the overall color appearance; and that not more than one-half of 1 percent, by count, of the peas may be blond, cream colored, or seriously detract from the overall color appearance.

(b) (*B*) *classification.* If the frozen peas possess a reasonably good color, a score of 16 to 17 points may be given. Frozen peas that score 16 points in this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably good color" means that the frozen peas possess a reasonably bright and reasonably uniform green color typical for the variety; that peas which very markedly from such typical green color do not materially affect the overall color appearance; and that not more than 1½ percent, by count, of the peas may be blond, cream colored, or seriously detract from the overall color appearance.

(c) (*C*) *Classification.* Frozen peas that possess a fairly good color may be given a score of 14 or 15 points. Frozen peas that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).

"Fairly good color" means that the frozen peas possess a fairly uniform green color typical for the variety, which may be dull but not off color; that peas which vary markedly from such typical green color do not seriously affect the overall color appearance; and that not more than 2 percent, by count, of all the peas may be blond, cream colored, or seriously detract from the overall color appearance.

(d) (*SStd.*) *classification.* Frozen peas that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3516 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, pieces of peas, blemished peas, seriously blemished peas, and other defects which affect the appearance or eating quality of the product.

(b) *Definition of defects.* (1) "Harmless extraneous vegetable material" means:

(i) *Group 1; flat material.* Succulent vegetable material common to the pea plant, such as leaves and pea pods;

(ii) *Group 2; spherical material.* Non-deleterious or non-poisonous types of nightshade berries, thistle buds, or other similar spherical vegetable material from other plants similar in color to frozen peas;

(iii) *Group 3; cylindrical material.* Cylindrical vegetable material, such as stems, common to the pea plant or from other plants which are similar in color to frozen peas.

(2) "Pieces of pea" (broken pea) means: (i) A whole pea from which a cotyledon or a large portion thereof has become separated;

(ii) Two detached whole cotyledons,

(iii) Pieces of cotyledon aggregating the equivalent of an average size cotyledon;

(iv) A whole detached skin or portions of detached skin aggregating the equivalent of an average size whole skin.

(3) "Blemished pea" means a pea that is blemished by discoloration or by other means that does not materially affect the appearance or eating quality of the pea.

(4) "Seriously blemished pea" means a pea that is hard, shriveled, spotted, discolored, or otherwise blemished to an extent that the appearance or eating quality is seriously affected. Peas commonly referred to as "blond" or "cream colored" peas are not considered seriously blemished peas.

(c) *Determination of allowances*—(1) *Determining percent, by count, of pieces of peas.* (i) The percent, by count, of pieces of peas is determined by dividing the total number of pieces of peas by the total number of peas and pieces of peas.

(ii) A pea held together by its skin, even though the cotyledons are partly crushed or the skin split, is not considered as a broken pea or piece of pea.

(2) *Harmless extraneous vegetable material.* (i) The allowances for harmless extraneous vegetable material are based on 30 ounces of frozen peas. When considering sample units of less than 30 ounces, the allowances provided in this section for the respective grade classification will be permitted in a single sample unit: *Provided,* That the average of such defects in the entire sample does not exceed such allowance.

(d) (*A*) *classification.* Frozen peas that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that: (See Table I of this subpart)

(1) For each 30 ounces of net weight there may be present not more than the following amounts of harmless extraneous vegetable material:

(i) Group 1; flat material, pieces having an aggregate area of not more than ¼ square inch (equivalent to ½ inch x ½ inch) on the surface; or 1 piece of any size; or

(ii) Group 2; spherical material, 1 unit; or

(iii) Group 3; cylindrical material, a piece or pieces which singly or in the aggregate do not exceed ½ inch in length.

(2) Not more than 7 percent, by count, of the peas may be pieces of peas;

(3) Not more than 2 percent, by count, of the peas may be blemished including not more than one-half of 1 percent, by count, of all the peas that may be seriously blemished;

(4) The presence of harmless extraneous vegetable material, pieces of peas, blemished peas, seriously belmished peas, and other defects individually or collectively, does not more than slightly affect the appearance or eating quality of the product.

(e) (*B*) *classification.* Frozen peas that are reasonably free from defects may be given a score of 32 to 35 points. Frozen peas that fall into this classification, except for pieces of peas, shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably free from defects" means that: (See Table I of this subpart.)

(1) For each 30 ounces of net weight there may be present not more than the following amounts of harmless extraneous vegetable material:

(i) When present as a single group:

(*a*) Group 1; flat material, pieces having an aggregate area of not more than ½ square inch (equivalent to ½ inch x 1 inch) on the surface; or 1 piece of any size; or

(*b*) Group 2; spherical material, 2 units; or

(*c*) Group 3; cylindrical material, a piece or pieces which singly or in the aggregate do not exceed 1 inch in length.

(ii) When present in combination, not more than 2 of any of the following groups:

(*a*) Group 1; flat material, pieces having an aggregate area of not more than ¼ square inch (equivalent to ½ inch x ½ inch) on the surface; or 1 piece of any size;

(*b*) Group 2; spherical material, 1 unit;

(*c*) Group 3; cylindrical material, a piece or pieces which singly or in the aggregate do not exceed ½ inch in length.

(2) Not more than 10 percent, by count, of the peas may be pieces of peas;

(3) Not more than 4 percent, by count, of the peas may be blemished including not more than 1 percent, by count, of all the peas that may be seriously blemished.

(4) The presence of harmless extraneous vegetable material, pieces of peas, blemished peas, seriously blemished peas, and other defects, individually or collectively, does not materially affect the appearance or eating quality of the product.

(f) (*C*) *classification.* Frozen peas that are fairly free from defects may be given a score of 28 to 31 points. Frozen peas that fall into this classification, except for pieces of peas, shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a partial limiting rule). "Fairly free from defects" means that: (See Table I of this subpart.)

(1) For each 30 ounces of net weight there may be present not more than the following amounts of harmless extraneous vegetable material:

(i) When present as a single group:

(*a*) Group 1; flat material, pieces having an aggregate area of not more than 1 square inch (equivalent to 1 inch x 1 inch) on the surface; or 1 piece of any size; or

(*b*) Group 2; spherical material, 3 units; or

(*c*) Group 3; cylindrical material, a piece or pieces which singly or in the aggregate do not exceed 2 inches in length.

(ii) When present in combination, not more than 2 or any of the following groups:

(*a*) Group 1; flat material, pieces having an aggregate area of not more than ½ square inch (equivalent to ½ inch x 1 inch) on the surface; or 1 piece of any size;

(*b*) Group 2; spherical material, 2 units;

(*c*) Group 3; cylindrical material, a piece or pieces which singly or in the aggregate do not exceed 1 inch in length.

(2) Not more than 15 percent, by count, of the peas may be pieces of peas;

(3) Not more than 6 percent, by count, of the peas may be blemished including not more than 3 percent, by count, of all the peas that may be seriously blemished;

(4) The presence of harmless extraneous vegetable material, pieces of

peas, blemished peas, seriously blemished peas, and other defects, individually or collectively, does not seriously affect the appearance or eating quality of the product.

TABLE I—SUMMARY OF MAXIMUM ALLOWANCES FOR DEFECTS

Kind of defect	Grade classification				
	Grade A	Grade B		Grade C	
		When present as single group	Combination of any 2	When present as single group	Combination of any 2
Harmless extraneous vegetable material (for each 30 ozs.).					
Group 1—Flat material	¼ square inch or 1 piece of any size or	½ square inch or 1 piece of any size or	¼ square inch or 1 piece of any size	1 square inch or 1 piece of any size or	½ square inch or 1 piece of any size.
Group 2—Spherical material.	1 unit or	2 units or	1 unit	3 units or	2 units.
Group 3—Cylindrical material.	1 piece or pieces not exceeding ½ in. aggregate	1 piece or pieces not exceeding 1 in. aggregate	1 piece or pieces not exceeding ½ in. aggregate	1 piece or pieces not exceeding 2 in. aggregate	1 piece or pieces not exceeding 1 in. aggregate.
Pieces of peas	7 percent [1] by count.	10 percent [1] by count		15 percent [1] by count.	
Blemished peas	2 percent by count.	4 percent by count		6 percent by count.	
Seriously blemished peas	which includes ⅓ percent by count	which includes 1 percent by count		which includes 3 percent by count.	

[1] Limiting rule does not apply.

(g) (*SStd.*) *classification.* Frozen peas that fail to meet the requirements of paragraph (f) of this section may be given a score of 0 to 27 points. Frozen peas that fall into this classification, except for pieces of peas that exceed 15 percent, by count, but do not exceed 20 percent, by count, shall not be graded above Substandard, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3517 Tenderness and maturity.

(a) *General.* The factor of tenderness and maturity refers to the degree of maturity of frozen peas as determined on the basis of the brine flotation test set forth in § 52.3518 by first removing the skins from the peas, and as reflected in the tenderness determined on the cooked product.

(b) (*A*) *classification.* Frozen peas that are tender may be given a score of 36 to 40 points. "Tender" means that the peas are in such a stage of maturity that not more than 10 percent, by count, of the peas may sink in a solution containing 13 percent, by weight, of salt (See Table II of this subpart); and that the frozen peas after cooking are very tender upon eating.

(c) (*B*) *classification.* Frozen peas that are reasonably tender may be given a score of 32 to 35 points. Frozen peas that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably tender" means that the peas are in such a stage of maturity that not more than 12 percent, by count, of the peas may sink in a solution containing 15 percent, by weight, of salt (See Table II of this subpart); and that the frozen peas after cooking are reasonably tender upon eating.

(d) (*C*) *classification.* Frozen peas that are fairly tender may be given a score of 28 to 31 points. Frozen peas that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly tender" means that the peas are in such a stage of maturity that not more than 16 percent, by count, of the peas may sink in a solution containing 16 percent, by weight, of salt (see Table II of this subpart); and that the frozen peas after cooking are fairly tender upon eating.

(e) (*SStd.*) *classification*. Frozen peas that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE II—SUMMARY OF MAXIMUM ALLOWANCES FOR THE BRINE FLOTATION TEST

Grade classification	Score range	Maximum number of peas (skins removed) that sink in 10 seconds	Salt in solution (percent)
Grade A	36 to 40	10 percent by count	13
Grade B	32 to 35	12 percent by count	15
Grade C	28 to 31	16 percent by count	61

METHODS OF ANALYSES

§ 52.3518 Brine flotation test.

(a) *Explanation.* The brine flotation test utilizes salt solutions of various specific gravities to separate the peas according to maturity. The brine solutions are based on the percentage by weight of pure salt (NaCl) in solution at 20 degrees C. In making the test the brine solutions are standardized to the proper specific gravity equivalent to the specified "percent of salt solutions at 20 degrees C." by using a salometer spindle accurately calibrated at 20 degrees C. A 250 ml. glass beaker or similar receptacle is filled with the brine solution to a depth of approximately 2 inches. The brine solution and sample must be at the same temperature and should closely approximate 20 degrees C.

(b) *Procedure.* After carefully removing the skins from the peas, place the peas into the solution. Pieces of peas and loose skins should not be used in making the brine flotation test. If cotyledons divide, use both cotyledons in the test and consider the 2 separated cotyledons as 1 pea; and, if an odd cotyledon sinks, consider it as one pea. Only peas that sink to the bottom of the receptacle within 10 seconds after immersion are counted as "peas that sink".

LOT INSPECTION AND CERTIFICATION

§ 52.3519 Ascertaining the grade of a lot.

The grade of a lot of frozen peas covered by these standards is determined by the procedures set forth in the regulations governing Inspection and Certification of Processed Fruits and Vegetables Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3520 Score sheet for frozen peas.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....

Factors		Score points	
Color	20	(A)	18-20
		(B)	[2] 16-17
		(C)	[2] 14-15
		(SStd.)	[1] 0-13
Defects	40	(A)	36-40
		(B)	[2] 32-35
		(C) [2]	28-31
		(SStd.)	[2] 0-27
Tenderness and maturity	40	(A)	[1] 32-35
		(B)	36-40
		(C)	[1] 28-31
		(SStd.)	[1] 0-27
Total score	100		

Flavor ( ) Good ( ) Fairly good ( ) Off ....
Varietal characteristics ( ) Similar ( ) Dissimilar ....
Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Frozen Peaches

SOURCE: 26 FR 4879, June 2, 1961, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.3551 Product description.

Frozen peaches are prepared from sound, mature, fresh peaches which are peeled, pitted, washed, cut, and may be trimmed to assure a clean and wholesome product. The peaches are properly drained of excess water before filling into containers; may be packed with the addition of a nutritive sweetening ingredient(s), including syrup and/or syrup containing pureed peaches and any other ingredient(s) permissible under the provisions of the Federal Food, Drug, and Cosmetic Act; are prepared and frozen in accordance with good commercial practice; and are maintained at temperatures necessary for the preservation of the product.

§ 52.3552 Varietal types of frozen peaches.

(a) *Yellow freestone.* Freestone peaches of the yellow-fleshed varieties which may have orange or red pigments emanating from the pit cavity;

(b) *White freestone.* Freestone peaches that are predominately white fleshed;

(c) *Red freestone.* Freestone peaches that have substantial red coloring in the flesh;

(d) *Yellow clingstone.* Clingstone peaches of the yellow or orange-fleshed varieties.

§ 52.3553 Styles of frozen peaches.

(a) "Halved" or "halves" means the peaches are cut approximately in half along the suture from stem to apex.

(b) "Quartered" or "quarters" means halved peaches cut into two approximately equal parts.

(c) "Sliced" or "slices" means the peaches are cut into sectors smaller than quarters.

(d) "Diced" means the peaches are cut into approximate cube-shaped units.

(e) "Mixed pieces of irregular sizes and shapes" means peaches cut or broken into pieces of irregular sizes and shapes and which do not conform to a single style of halves, quarters, or slices.

§ 52.3554 Grades of frozen peaches.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen peaches that (1) possess similar varietal characteristics, (2) have a normal flavor, (3) have a good color, (4) are practically uniform, or reasonably uniform, in size and symmetry for the applicable style, (5) are practically free from defects, (6) possess a good character within one of the following categories: I, soft-ripe fruit or II, firm-ripe fruit, and (7) score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of frozen peaches that (1) possess similar varietal characteristics, (2) have a normal flavor, (3) have a reasonably good color, (4) are reasonably uniform, or fairly uniform, in size and symmetry for the applicable style, (5) are reasonably free from defects, (6) possess a reasonably good character within one of the following categories: I, soft-ripe fruit or II, firm-ripe fruit, and (7) score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of frozen peaches that (1) possess similar varietal characteristics, (2) have a normal flavor, (3) have a fairly good color, (4) are fairly uniform in size and symmetry for the applicable style, (5) are fairly free from defects, (6) possess a fairly good character within one of the following categories: I, soft-ripe fruit, II, firm-ripe fruit, or III, mixed soft-ripe and firm-ripe fruit, and (7) score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen peaches that fail to meet the requirements of U.S. Grade C.

FACTORS OF QUALITY

§ 52.3555 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standard, the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics;

(ii) Flavor.

(2) *Factors rated by score points.* (i) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Size and symmetry	20
Defects	30
Character	30
Total score	100

(ii) Quality factors are evaluated immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units.

(b) *Definition of normal flavor.* "Normal flavor" means that the frozen peaches are free from objectionable flavors or objectionable odors of any kind.

§ 52.3556 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "18 to 20 points" means 18, 19, or 20 points.)

§ 52.3557 Color.

(a) *General.* The score for the factor of color is evaluated by considering the overall color of the units. Abnormal discoloration near or part of the pit cavity shall be considered in the evaluation of the overall color of the unit.

(b) (*A*) *classification.* Frozen peaches that possess a good color may be given a score of 18 to 20 points. "Good color" means that the frozen peaches possess a color that is bright, reasonably uniform, and typical of reasonably well-ripened to well-ripened peaches of the type and variety which have been properly prepared and properly processed; that not more than 10 percent, by weight, of the drained thawed peaches may possess no more than a slight tinge of green or slight tinge of brown color due to oxidation, improper processing, or other causes, and none may possess a pronounced green or brown color.

(c) (*B*) *classification.* Frozen peaches that possess a reasonably good color may be given a score of 16 or 17 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the frozen peaches possess a color that is reasonably bright, fairly uniform, and typical of reasonably well-ripened peaches of the type and variety which have been properly prepared and properly processed; that not more than a total of 20 percent by weight of the drained thawed peaches may be affected by green or brown color of which not more than 5 percent, by weight, of the drained thawed peaches may have a pronounced green or a pronounced brown color and the remainder of this allowance (20 percent) may have no more than a slight tinge of green or of brown color: *Provided,* That any such peaches do not materially affect the appearance of the product.

(d) (*C*) *classification.* Frozen peaches that possess a fairly good color may be given a score of 14 or 15 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the frozen peaches vary in color typical of fairly well-ripened peaches of the type and variety, including units that may possess slight tinges of green or brown color; and that not more than 15 percent, by weight, of the drained thawed peaches may be materially affected by brown color due to oxidation, improper processing, or other causes or may possess a pronounced green color: *Provided,* That any of such units individually or collectively do not seriously affect the appearance of the product.

(e) (*SStd.*) *classification.* Frozen peaches that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3558 Size and symmetry.

(a) *General.* The factor of size and symmetry refers to the uniformity of size and to the symmetry of the units of peaches in halved, quartered, and sliced styles. This factor does not apply to the diced style or that of "mixed pieces of irregular sizes and shapes;" the total score for either of these styles is determined by multiplying the sum of the scores assigned for color, defects, and character by 100 and dividing by 80, dropping any fractions.

(b) *Off-suture cut.* "Off-suture cut" means a halved or quartered peach unit which has been cut at a distance from the suture greater than ⅜ inch at the widest measurement from the suture.

(c) *Partially detached or detached piece.* A "partially detached or detached piece" in the style of halves means a unit which has the appearance of a slice resulting from an off-suture cut or from improper cutting and which may or may not be attached to the half from which cut. In determining the applicable allowance in terms of percentage by count, a partially detached piece together with the half to which it is partially attached is considered as one unit or a detached piece with the half from which detached or together with any other half is considered as one unit.

(d) *Partial or broken slice.* A "partial or broken slice" is a unit that has had the semblance of a slice with respect to thickness and shape but is less than three-fourths of an apparent full slice or that is seriously cracked, crushed, broken or severed into definite parts.

(e) *Sliver.* A "sliver" is a sector that (1) is substantially smaller than the predominant size of slice or that (2) weighs three grams or less.

(f) *Slab.* A "slab" in the style of slices is a portion of a unit which does not conform to the shape of a definite slice due to improper cutting.

(g) *Broken halves or quarters.* "Broken halves or quarters" means peach halves or quarters that are seriously cracked or severed into definite parts. Portions equivalent to the weight of an average full-sized unit may be considered as one-half (or quarter) in determining the percentage, by count.

(h) *(A) classification.* Halved, quartered, or sliced frozen peaches that are practically uniform in size and symmetry may be given a score of 18 to 20 points. "Practically uniform in size and symmetry" has the following meanings with respect to the following styles:

(1) *Halves; quarters.* In a 32-ounce sample unit of thawed drained peaches, or entire contents of smaller package, the weight of the largest normal-shaped unit does not exceed the weight of the smallest normal-shaped unit by more than 75 percent; and that not more than 10 percent, by count, of the units may possess off-suture cuts or partially detached or detached pieces, or broken halves or quarters, or any combination thereof.

(2) *Slices.* (i) Not more than 10 percent by weight of the thawed drained peaches may consist of partial or broken slices, slivers, disintegrating fragments or other than practically intact slices and slabs;

(ii) Not more than 5 percent, by weight, of the thawed drained peaches may be slabs; and

(iii) The variation in size of the practically intact slices does not materially affect the appearance of the product.

(i) *(B) classification.* Halved, quartered, or sliced frozen peaches that are reasonably uniform in size and symmetry may be given a score of 16 or 17 points. "Reasonably uniform in size and symmetry" has the following meanings with respect to the following styles:

(1) *Halves; quarters.* In a 32-ounce sample unit of thawed drained peaches, or entire contents of smaller package, the weight of the largest normal-shaped unit does not exceed the weight of the smallest normal-shaped unit by more than 100 percent; and that not more than 20 percent, by count of the units may consist of off-suture cuts or partially detached or detached pieces, or broken halves or quarters, or any combination thereof.

(2) *Slices.* (i) Not more than 20 percent, by weight, of the thawed drained

peaches may consist of partial or broken slices, slivers, disintegrating fragments or other than practically intact slices and slabs;

(ii) Not more than 10 percent by weight of the thawed drained peaches may be slabs;

(iii) The variation in size of the practically intact slices does not seriously affect the appearance of the product.

(j) (*C*) *classification.* Halved, quartered, or sliced frozen peaches that are fairly uniform in size and symmetry may be given a score of 14 or 15 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade B (this is a partial limiting rule) "Fairly uniform in size and symmetry" has the following meanings with respect to the following styles:

(1) *Halves; quarters.* Not more than 40 percent, by count, of the units may consist of off-suture cuts or partially detached or detached pieces, or broken halves or quarters, or any combination thereof.

(2) *Slices.* Not more than a total of 25 percent, by weight of the thawed, drained peaches may consist of partial or broken slices, slivers, disintegrating fragments or slabs: *Provided,* That not more than 15 percent by weight of such thawed drained peaches may consist of slabs.

(k) (*SStd.*) *classification.* Frozen peaches that fail to meet the requirement of paragraph (j) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3559 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous material, pit material, peel, blemishes, and from any other defects not specifically mentioned (such as, but not limited to, very light bruises) that detract from the appearance or edibility of the product.

(1) *Harmless extraneous materials.* "Harmless extraneous materials" means harmless vegetable materials such as leaves and stems and portions thereof.

(2) *Blemished unit.* "Blemished unit" means a unit affected by discoloration, bruise, scab, hail or other abnormality of such nature that the appearance or eating quality of the unit is materially affected; if the appearance or eating quality is seriously affected the unit is designated as a "seriously blemished unit."

(b) (*A*) *classification.* Frozen peaches that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means:

(1) That the frozen peaches are practically free from pit material, from harmless extraneous material, and from any defects not specifically mentioned that affect the appearance or edibility of the product;

(2) In addition, any peel, blemished units or seriously blemished units present do not exceed the allowances specified in Table I for the thawed drained peaches in the individual package or other sample unit, and the average allowance for the entire sample. (Although the maximum permitted in the individual sample unit may be as much as twice that of the average allowances, compliance of the entire sample with the average allowance is a prerequisite to scoring the sample unit within this classification for the factor of "Defects,"); and

(3) Notwithstanding the allowances in Table I of this paragraph, the defects that may be present do not more than slightly affect the appearance or edibility of the product.

(c) (*B*) *classification.* Frozen peaches that are reasonably free from defects may be given a score of 24 to 26 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means:

(1) That the frozen peaches are practically free from pit material; are reasonably free from harmless extraneous material and from any defects not specifically mentioned that affect the appearance or edibility of the product;

(2) In addition, any peel, blemished units, and seriously blemished units present do not exceed the allowances

specified in Table II for the thawed drained peaches in the individual package or other sample unit, and the average allowance for the entire sample. (Although the maximum permitted in the individual sample unit may be as much as twice that of the average allowance, compliance of the entire sample with the average allowance is a prerequisite to scoring the same unit within this classification for the factor of "Defects"); and

TABLE I—(A) CLASSIFICATION—MAXIMUM ALLOWANCES FOR PEEL, BLEMISHED UNITS AND SERIOUSLY BLEMISHED UNITS

Style	Defect	Based on thawed drained peaches in individual package or other sample unit(s)			
		Individual containers with 16 ounces or less	Individual containers or sample units with more than 16 ounces to 32 ounces inclusive	Sample units with more than 32 ounces	Average for entire sample
Halves and quarters	Peel	1 square inch	2 square inches	1 square inch per 32 ounces.	1 square inch per 32 ounces.
	Blemished units	1 unit	2 units: including no more than—.	1 per 32 ounces	1 per 32 ounces.
		or		and	and
	Seriously blemished units.	1 serious	1 serious	1 per 64 ounces	1 per 64 ounces.
Sliced, diced and mixed pieces of irregular sizes and shapes.	Peel	1 square inch	2 square inches	1 square inch per 32 ounces	1 square inch per 32 ounces
	Blemished units	2 units: including no more than—.	4 units: including no more than—.	2 per 32 ounces	2 per 32 ounces.
				and	and
	Seriously blemished units.	1 serious	2 serious	1 per 32 ounces	1 per 32 ounces.

TABLE II—(B) CLASSIFICATION—MAXIMUM ALLOWANCES FOR PEEL, BLEMISHED UNITS AND SERIOUSLY BLEMISHED UNITS

Style	Defect	Based on thawed drained peaches in individual package or other sample unit(s)			
		Individual containers with 16 ounces or less	Individual containers or sample units with more than 16 ounces to 32 ounces inclusive	Sample units with more than 32 ounces	Average for entire sample
Halves and quarters	Peel	1½ square inches	3 square inches	1½ square inches per 32 ounces.	1½ square inches per 32 ounces.
	Blemished units	2 units: including no more than—.	4 units: including no more than—.	2 per 32 ounces	2 per 32 ounces.
				and	and
	Seriously blemished units	1 serious	2 serious	1 per 32 ounces	1 per 32 ounces.
Sliced; dices; and mixed pieces of irregular sizes and shapes.	Peel	1½ square inches	3 square inches	1½ square inches per 32 ounces.	1½ square inches per 32 ounces.
	Blemished units	4 units: including no more than—.	8 units: including no more than—.	4 per 32 ounces	4 per 32 ounces.
				and	and
	Seriously blemished units.	2 serious	4 serious	2 per 32 ounces	2 per 32 ounces.

(3) Notwithstanding the allowances in Table II of this paragraph, the defects that may be present do not materially affect the appearance or edibility of the product.

(d) (*C*) *classification.* Frozen peaches that are fairly free from defects may be given a score of 21 to 23 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a timing rule). "Fairly free from defects" means:

(1) That the frozen peaches are practically free from pit material; are fairly free from harmless extraneous material and from any defects not specifically mentioned that affect the appearance or edibility of the product;

(2) In addition, any peel, blemished units, and seriously blemished units present do not exceed the allowances specified in Table III for the thawed drained peaches in the individual package or other sample unit, and the average allowances for the entire sample. (Although the maximum permitted in the individual sample unit may be as much as twice that of the average allowance, compliance of the entire sample with the average allowance is a prerequisite for scoring the sample unit within this classification for the factor of "Defects"); and

TABLE III—(C) CLASSIFICATION—MAXIMUM ALLOWANCES FOR PEEL, BLEMISHED UNITS AND SERIOUSLY BLEMISHED UNITS

Style	Defect	Based on thawed drained peaches in individual package or other sample unit(s)			
		Individual containers with 16 ounces or less	Individual containers or sample units with more than 16 ounces to 32 ounces inclusive	Sample units with more than 32 ounces	Average for entire sample
Halves and quarters	Peel	2 square inches	4 square inches	2 square inches per 32 ounces	2 square inches per 32 ounces
	Blemished units	4 units: including no more than—	8 units: including no more than—	4 per 32 ounces and	4 per 32 ounces and
	Seriously blemished units	2 serious	4 serious	2 per 32 ounces	[illegible] per 32 ounces
Sliced; diced; and mixed pieces of irregular sizes and shapes	Peel	2 square inches	4 square inches	2 square inches per 32 ounces	2 square inches per 32 ounces
	Blemished units	8 units: including no more than—	16 units: including no more than—	8 per 32 ounces and	8 per 32 ounces and
	Seriously blemished units	4 serious	6 serious	3 per 32 ounces	3 per 32 ounces

(3) Notwithstanding the allowances of Table III of this paragraph, the defects that may be present do not seriously affect the appearance or edibility of the product.

(e) (*SStd.*) *classification.* Frozen peaches that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3560 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture, the firmness, and the tenderness of the fruit, and the tendency of the units to retain their apparent conformation and size without material disintegration.

(b) (*A*) *classification.* Frozen peaches that possess a good character may be given a score of 27 to 30 points. "Good character" means that the units possess a tender texture characteristic of mature well-ripened peaches for the varietal type, and which units after defrosting and proper handling retain good conformation, and are reasonably uniform in texture within either of the following categories:

(1) *I—Soft-ripe fruit.* Units vary from soft to slightly firm, with not more than a total of 10 percent, by weight, of thawed drained peaches in which the units may be very soft, mushy, firm, and rubbery or tough within the following further limitations:

(i) Not more than 5 percent, by weight, of thawed drained peaches may be mushy; and

(ii) Not more than 2 percent, by weight, of thawed drained peaches may be rubbery or tough, and none may be hard.

(2) *II—Firm-ripe fruit.* Units vary from slightly firm to firm, with not more than a total of 10 percent, by weight, of thawed drained peaches in which the units may be soft, very soft, and rubbery or tough within the following further limitations:

(i) Not more than 2 percent, by weight, of thawed drained peaches may be very soft; and

(ii) Not more than 5 percent, by weight, of thawed drained peaches may be rubbery or tough, and none may be hard.

(c) (*B*) *classification.* Frozen peaches that possess a reasonably good character may be given a score of 24 to 26 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the units possess a reasonably tender texture characteristic of mature and at least reasonably well-ripened peaches for the varietal type, and which units, after defrosting and proper handling retain reasonably good conformation and are fairly uniform in texture within either of the following categories:

(1) *I—Soft-ripe fruit.* Units vary from soft to slightly firm with not more than 20 percent, by weight, of the thawed drained peaches in which the units may be very soft, mushy, firm, and rubbery and tough within the following further limitations:

(i) Not more than 10 percent, by weight, of the thawed drained peaches may be mushy; and

(ii) Not more than 5 percent, by weight, of the thawed drained peaches may be rubbery or tough, and none may be hard.

(2) *II—Firm-ripe fruit.* Units may vary from slightly firm to firm, with not more than 20 percent, by weight, of the thawed drained peaches in which the units may be mushy, soft, very soft, rubbery or tough, and hard within the following further limitations:

(i) Not more than 5 percent, by weight, of the thawed drained peaches may be mushy; and

(ii) Not more than 10 percent, by weight, of the thawed peaches may be rubbery or tough; and

(iii) Not more than 5 percent, by weight, of the thawed drained peaches may be hard.

(d) (*C*) *classification.* Frozen peaches that possess a fairly good character may be given a score of 21 to 23 points. Frozen peaches that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the units possess a fairly tender texture characteristic of mature and fairly well-ripened peaches for the varietal type, and which units, after defrosting and proper handling retain fairly good conformation but may be variable in texture within any one of the following categories:

(1) *I—Soft-ripe fruit.* Not less than 50 percent, by weight, of the thawed drained peaches vary from very soft to firm. The remainder may be mushy, firm, rubbery or tough, and hard within the following further limitations:

(i) Not more than 25 percent, by weight, of the thawed drained peaches may be mushy; and

(ii) Not more than 25 percent, by weight, of the thawed drained peaches may be firm, rubbery or tough, and hard within the following further limitation:

(*a*) Not more than 10 percent, by weight, of the thawed drained peaches may be rubbery or tough; and (*b*) Not more than 10 percent, by weight, of the thawed drained peaches may be hard.

(2) *II—Firm-ripe fruit.* Not less than 50 percent, by weight, of the thawed drained peaches vary from slightly firm to firm. The remainder may be mushy, very soft, soft, rubbery or tough, and hard within the following further limitations:

(i) Not more than 25 percent, by weight, of the thawed drained peaches may be rubbery or tough and/or hard except that not more than 20 percent, by weight, of the thawed drained peaches may be hard; and

(ii) Not more than 25 percent, by weight, of the thawed drained peaches may be mushy, very soft, and soft within the following further limitations:

(*a*) Not more than 10 percent, by weight, of the thawed drained peaches may be mushy.

(3) *III—Mixed soft-ripe and firm-ripe fruit.* Not less than 50 percent, by weight, of the thawed drained peaches vary from very soft to firm. The remainder may be mushy, tough or rubbery, and hard within the following further limitations:

(i) Not more than 25 percent, by weight, of the thawed drained peaches may be mushy; and

(ii) Not more than 25 percent, by weight, of the thawed drained peaches may be rubbery or tough, and hard except that not more than 20 percent of the thawed, drained peaches may be hard.

(e) (*SStd.*) *classification.* Frozen peaches that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

METHODS OF ANALYSIS

§ 52.3561 Determination of drained fruit.

The weight of thawed drained peaches in a sample unit is determined as follows:

(a) *Equipment.*

Flat grading trays.
Table fork, spoon, spatula.
Glass beakers.
Torsion or triple beam balance.

(b) *Procedure.* (1) If the sample unit is 16 ounces or less in total contents, use the entire sample unit. If the sample unit is more than 16 ounces select a representative aliquot of 16 ounces or more for the determination.

(2) Weigh and carefully place the weighed thawed sample unit on the tray. Raise one end of the tray slightly and arrange material, if necessary, so any adhering packing media will drain to the other end of the tray away from the peach material. The solid and semisolid peach material on the upper end of the tray is the "thawed drained peaches" referred to in these standards.

(3) At the end of one minute remove the liquid material drained from the fruit with a siphon, basting syringe or other suitable method and weigh.

(4) For purposes of calculation the weight of the thawed drained peaches is the weight of the product which was placed on the tray less the weight of the liquid removed.

(5) Percentages by weight of the various categories scorable against the factors of color, size and symmetry, defects, and character are determined by separating the material being considered from the rest by carefully removing with a fork, spoon or spatula and weighing separately.

(6) Divide each such weight by the total weight as obtained in paragraph (b)(3) of this section to obtain the percentage, by weight, of drained thawed peaches in each category.

LOT INSPECTION AND CERTIFICATION

§ 52.3562 Ascertaining the grade of a lot.

The grade of a lot of frozen peaches covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.3563 Score sheet for frozen peaches.

Number, size, and kind of container ....
Container mark or identification:
  Containers or sample ....
  Cases ....
Label (styles, varietal type, added ingredients; fruit ... to sugar, etc., ratio (if shown)) ....
Net weight (ounces) ....
Type ....
Color ....
Style ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	[1] 16–17
		(C)	[1] 14–15
		(SStd.)	[1] 0–13
Size and symmetry	20	(A)	18–20
		(B)	16–17
		(C)	[2] 14–15
		(SStd.)	[1] 0–13
Defects	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Character	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd.)	[1] 0–20
Total score	100		

Varietal characteristics: ( ) Similar; ( ) Dissimilar ....
Flavor: ( ) Normal; ( ) Not normal ....
Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Canned Squash (Summer Type)

SOURCE: 22 FR 6081, Aug. 2, 1957, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.3581 Product description.

"Canned squash (summer-type)" is the canned product prepared from clean, sound, succulent, immature summer type squash, called canned squash in this subpart, which has been washed, properly trimmed and sorted. The product is packed in accordance with good commercial practice and is sufficiently processed by heat to assure preservation of the product in hermatically sealed containers.

§ 52.3582 Styles of canned squash.

(a) "Whole" means canned squash consisting of whole squash with stems removed.

(b) "Sliced crosswise" means canned squash consisting of units cut at right angle to the longitudinal axis into slices of approximately uniform thickness with parallel surfaces.

(c) "Diced" means canned squash which has been cut into fairly uniform diced units.

(d) "Cut" means canned squash cut into units which are not uniform in size or shape or which do not conform to any of the foregoing styles.

[23 FR 1984, Mar. 26, 1958. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3583 Grades of canned squash.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of canned squash that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a fairly good color; that is fairly free from defects; that possesses a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 85 points.

(b) "U.S. Grade C" or "U.S. Standard" is the quality of canned squash that possesses similar varietal characteristics; that possesses a normal flavor; that possesses a good color; that is practically free from defects; that possesses a fairly good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart the total score is not less than 70 points.

(c) "Substandard" is the quality of canned squash that fails to meet the requirements of U.S. Grade C or U.S. Standard.

FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.3584 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned squash be filled with squash as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§52.3585 Drained weights.

(a) *General.* The minimum drained weight recommendations for canned squash in table I hereof are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining drained weight.* The drained weight is determined by emptying the contents of the container upon a United States Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve to facilitate drainage, and allow the product to drain for two minutes. The drained weight is the weight of the sieve and the product less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 3 size can (404 × 414) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Compliance with recommended drained weights.* Compliance with the recommended drained weights is determined by averaging the drained weight from all the containers which are representative of a specific lot and such lot is considered as meeting the recommendations if the following criteria are met:

(1) The average of the drained weights from all of the containers meets the recommended drained weights.

(2) One-half or more of the containers meets the recommended drained weight; and

(3) The drained weights from the containers which do not meet the recommended drained weight are within the range of variability for good commercial practice.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS, IN OUNCES, OF CANNED SQUASH

Container size or designation	Maximum head-space allowable (measured from top of dbl seam)—(16th of an inch)	Styles of canned (summer type squash)	
		Whole	Sliced or cut
8-ounce tall	7.6	4.5	5.5
No. 303	9.4	10.8	11.0
No. 2	9.7	13.0	13.1
No. 10	13.6	70.0	70.0

[22 FR 6081, Aug. 2, 1957, as amended at 24 FR 3149, Apr. 23, 1959. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Factors of Quality

§ 52.3586 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors which are not scored.* (i) Varietal characteristics;

(ii) Flavor.

(2) *Factors which are scored.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Defects	40
Character	40
Total score	100

(b) *Normal flavor.* "Normal flavor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.3587 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, 20 points.)

§ 52.3588 Color.

(a) (*A*) *classification.* Canned squash that possesses a good color may be given a score of 17 to 20 points. "Good color" means that the color of the squash is bright and typical of young and tender squash of similar varietal characteristics which has been properly processed.

(b) (*C*) *classification.* Canned squash that possesses a fairly good color may be given a score of 14 to 16 points. Canned squash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the color of the squash is typical of fairly young and tender squash of similar varietal characteristics which has been properly processed.

(c) (*SStd.*) *classification* Canned squash that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3589 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, sand, grit, or silt, poorly cut units, units damaged by mechanical injury, and units damaged by discoloration, scars, insect, injury, or damaged by other means.

(1) "Unit" means a whole squash or a portion of a squash.

(2) "Damaged unit" means any unit damaged by discoloration, scars, insect injury, or by other means except damaged by mechanical injury to the extent that the appearance or eating quality is materially affected.

(3) "Seriously damaged" means damaged to the extent that the appearance or eating quality of the unit is seriously affected.

(4) "Harmless extraneous vegetable material" means leaves, detached stems or portions thereof, or similar vegetable material.

(5) "Poorly cut" means units with attached stems or stem material, very ragged cut units, and pieces of less than one-half slice in sliced style squash, pieces measuring one-half inch or less in the longest dimension for cut style, and pieces measuring less than one-quarter inch in the longest dimension for diced style.

(6) "Damaged by mechanical injury" means broken or mashed to such an extent that the appearance or eating quality of the unit is seriously affected.

(7) "Sand, grit, or silt" means any particle of earthy material.

(b) (*A*) *classification.* Canned squash that is practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the product contains no grit, sand, or silt that affects the eating quality or appearance of the canned squash; that for each 12 ounces of drained weight there may be present not more than one piece of harmless extraneous vegetable material. The combined weight of all other defects and defective units shall not exceed 12 percent of the drained weight of the units: *Provided,* That

(1) Not more than 4 percent, by weight, is of damaged units and of such 4 percent not more than one-fourth thereof or 1 percent, by weight, of all the units consist of units that are seriously damaged; or

(2) Not more than 10 percent, by weight, is of poorly cut units, or of units damaged by mechanical injury, or any combination thereof of not more than 10 percent, by weight: *Provided,* That poorly cut units with attached stems or stem material does not exceed 2 percent, by weight.

(c) (*C*) *classification.* If the canned squash is fairly free from defects a score of 28 to 33 points may be given. Canned squash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the product may contain a trace of sand, grit, or silt that does not materially affect the eating quality or appearance of the canned squash; that for each 12 ounces of drained weight there may be present not more than two pieces of harmless extraneous vegetable material. The combined weight of all other defects and defective units shall not exceed 20 percent of the drained weight of the units: *Provided*, That

(1) Not more than 8 percent, by weight, is of damaged units and of such 8 percent, not more than one-fourth thereof or 2 percent, by weight, of all the units consist of units that are seriously damaged.

(2) Not more than 15 percent, by weight, is of poorly cut units, or of units damaged by mechanical injury, or any combination thereof of not more than 15 percent, by weight: *Provided*, That poorly cut units with attached stems or stem material does not exceed 5 percent, by weight.

(d) (*SStd.*) *classification.* Canned squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[22 FR 6081, Aug. 2, 1957, as amended at 23 FR 1984, Mar. 26, 1958. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3590 Character.

(a) *General.* The factor of character refers to the fleshy texture, the tenderness, and the degree of development of the seeds.

(b) (*A*) *classification.* Canned squash that possesses a good character may be given a score of 34 to 40 points. "Good character" means that the units are practically intact, are fleshy and tender, that the seeds are in the immature stage, and that not more than 5 percent, by weight, of the units may be of fairly good character.

(c) (*C*) *classification.* If the canned squash possesses a fairly good character a score of 28 to 33 points may be given. Canned squash that falls into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the units may show slight disintegration, may have lost to a considerable extent their fleshy texture, may be fairly tender, and that the seeds may have passed the immature stage of maturity, but are not hard and that not more than 10 percent, by weight, of the units fail to meet the requirements for fairly good character.

(d) (*SStd.*) *classification.* Canned squash that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3591 Ascertaining the grade of a lot.

The grade of a lot of Canned Squash (Summer Type) covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.3592 Score sheet for canned squash.

Size and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....
Drained weight (ounces) ....
Style (whole, sliced, cut) ....

Factors		Score points	
Color	20	(A)	17-20
		(C)	[1] 14-16
		(SStd.)	[1] 0-13
Defects	40	(A)	34-40
		(C)	[1] 28-33
		(SStd.)	[1] 0-27
Character	40	(A)	34-40
		(C)	28-33
		(SStd.)	[1] 0-27
Total score	100		

Grade ....
Flavor and odor ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Tomato Juice

SOURCE: 50 FR 29636, July 22, 1985, unless otherwise noted.

§ 52.3621 Product description.

(a) *"Tomato juice"* is the product as defined in the Standards of Identity for Tomato Juice (21 CFR 156.145), issued under the Federal Food, Drug, and Cosmetic Act.

(b) *"Tomato juice from concentrate"* is the product as defined in the Standards of Identity for Tomato Juice (21 CFR 156.145), issued under the Federal Food, Drug, and Cosmetic Act.

§ 52.3622 Definitions of terms.

In these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Color*—(1) *General.* The amount of red in tomato juice and tomato juice from concentrate is determined by comparing the color of the product with the Munsell color discs with specified percentages. The availability and procedure for using the Munsell color discs may be obtained from the supplier licensed by the U.S. Department of Agriculture:

Munsell Color Company, 2441 North Calvert Street, Baltimore, Maryland 21218

Any method or device approved by the USDA (including electronic color meters) which gives equivalent results may be used.

(2) *"Good color"* means a color that is bright and characteristic of tomato juice, made from mature red tomatoes, which is not affected by caramelization, oxidation or other similar causes. Such color contains as much red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color:

65 percent of the area of Red (5R 2.6/13) (glossy finish);
21 percent of the area of Yellow (2.5 YR 5/12) (glossy finish); and
14 percent of the area of either Black (N1) (glossy finish) or Grey (N4) (mat finish); or
7 percent of the area of Black (N1) (glossy finish) and
7 percent of the area of Grey (N4) (mat finish), whichever most nearly matches the reflectance of the product.

(3) *"Reasonably good color"* means a color that is typical of red tomato juice which may be slightly affected by caramelization, oxidation or other similar causes.

(i) To score 25 points for color, the juice shall contain as much red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color:

59 percent of the area of Red (5R 2.6/13) (glossy finish);
24½ percent of the area of Yellow (2.5 YR 5/12) (glossy finish); and
16½ percent of the area of either Black (N1) (glossy finish) or Grey (N4) (mat finish); or
8¼ percent of the area of Black (N1) (glossy finish) and
8¼ percent of the area of Grey (N4) (mat finish), whichever most nearly matches the reflectance of the product.

(ii) To score 23 or 24 points for color, the juice shall contain as much red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color:

53 percent of the area of Red (5R 2.6/13) (glossy finish);
28 percent of the area of Yellow (2.5 YR 5/12) (glossy finish); and
19 percent of the area of either Black (N1) (glossy finish) or Grey (N4) (mat finish); or
9½ percent of the area of Black (N1) (glossy finish) and
9½ percent of the area of Grey (N4) (mat finish), whichever most nearly matches the reflectance of the product.

(b) *Consistency* means the viscosity of tomato juice or tomato juice from concentrate including the degree of separation of the insoluble solids.

(1) *Good consistency* means that the juice flows readily; has a normal amount of insoluble tomato solids in suspension; and that there is little solids separation.

(2) *Reasonably good consistency* means that the juice flows readily; has a normal amount of insoluble tomato solids in suspension; and that there is not a marked degree of solids separation.

(c) *Defects* means dark specks or scale-like particles, seeds, particles of seed, tomato peel, core material, or other similar substances.

(1) *Practically free from defects* means that any defects present do not more than slightly affect the appearance or drinking quality of the product.

(2) *Reasonably free from defects* means that any defects present may be noticeable, but are not so large, so numerous, or of such contrasting color as to seriously affect the appearance or drinking quality of the product.

(d) *Flavor.* Flavor is evaluated based upon characteristics normal to tomato juice or tomato juice from concentrate.

(1) *Good flavor* means a distinct tomato juice flavor and odor characteristic of good quality tomatoes which is not materially affected by stems, leaves, crushed seeds, cores, immature tomatoes, or the effects of improper trimming or processing.

(2) *Reasonably good flavor* means a characteristic tomato juice flavor which may be materially, but not seriously, affected by stems, leaves, crushed seeds, cores, immature tomatoes, or the effects of improper trimming or processing.

(e) *Tomato soluble solids* (TSS) means the sucrose value as determined by the method prescribed in 21 CFR 156.3.

§ 52.3623 Recommended sample unit sizes.

The requirements for all factors of quality are based on the following:

(a) The entire contents of a container;

(b) A representative portion of the contents of a container;

(c) A combination of the contents of two or more containers; or

(d) A representative portion of processed product stored or held in bulk containers.

§ 52.3624 Grades.

(a) *U.S. Grade A* is the quality of tomato juice or tomato juice from concentrate that meets the applicable requirements of Tables I or II.

(b) *U.S. Grade B* is the quality of tomato juice or tomato juice from concentrate that meets the applicable requirements of Tables I or II.

(c) *Substandard* is the quality of tomato juice or tomato juice from concentrate that fails to meet the requirements for "U.S. Grade B."

§ 52.3625 Recommended fill of container.

Fill of container is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of tomato juice be filled as full as practicable without impairment of quality, and that the product occupies not less than 90 percent of the capacity of the container.

§ 52.3626 Factors of quality and analysis.

(a) The grade of a lot of tomato juice or tomato juice from concentrate is based on evaluation and analysis of the juice for the following quality and analytical factors:

(1) Color;

(2) Consistency;

(3) Defects;

(4) Flavor; and

(5) Tomato soluble solids (tomato juice from concentrate).

(b) The relative importance of each quality factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	30
Consistency	15
Defects	15
Flavor	40
Total Score	100

(c) The essential variations within each factor are so described that the value may be determined for each factor and expressed numerically. The numerical range for the rating of each factor is inclusive (for example, 13 to 15 points means 13, 14, or 15 points) and the score points shall be prorated relative to the degree of excellence for each factor.

§ 52.3627 Requirements for grades.

TABLE I—TOMATO JUICE

Quality factors	Factor description	Grade	Score point range
Color	Good	(A)	26-30
	Reasonably good	(B)	[1]25 [2]23-24
Consistency	Good	(A)	13-15
	Reasonably good	(B)	[3]10-12
Defects	Practically free	(A)	13-15
	Reasonably free	(B)	[4]10-12
Flavor	Good	(A)	33-40
	Reasonably good	(B)	[4]27-32
Minimum total score.		(A)	85 points
		(B)	70 points

[1] Tomato juice assigned 25 points for the factor of color can be graded U.S. Grade A, provided all other requirements for U.S. Grade A are met and that the total score for the product is not less than 85 points.

[2] Tomato juice assigned 23 or 24 points for the factor of color cannot be graded above U.S. Grade B regardless of the total score for the product.

[3] Tomato juice possessing only "reasonably good consistency" (10-12 points) can be graded U.S. Grade A, provided all other requirements for U.S. Grade A are met and that the total score for the product is not less than 85 points.

[4] Cannot be graded above U.S. Grade B regardless of the total score for the product.

TABLE II—TOMATO JUICE FROM CONCENTRATE

Tomato soluble solids (minimum)		5.0 percent by weight	
Quality factors	Factor description	Grade	Score point range
Color	Good	(A)	26-30
	Reasonably good	(B)	[1]25 [2]23-24
Consistency	Good	(A)	13-15
	Reasonably good	(B)	[3]10-12
Defects	Practically free	(A)	13-15
	Reasonably free	(B)	[4]10-12
Flavor	Good	(A)	33-40
	Reasonably good	(B)	[4]27-32
Minimum total score.		(A)	85 points
		(B)	70 points

[1] Tomato juice from concentrate assigned 25 points for the factor of color can be graded U.S. Grade A, provided all other requirements for U.S. Grade A are met and that the total score for the product is not less than 85 points.

[2] Tomato juice from concentrate assigned 23 or 24 points for the factor of color cannot be graded above U.S. Grade B regardless of the total score for the product.

[3] Tomato juice from concentrate possessing only "reasonably good consistency" (10-12 points) can be graded U.S. Grade A, provided all other requirements for U.S. Grade A are met and that the total score for the product is not less than 85 points.

[4] Cannot be graded above U.S. Grade B regardless of the total score for the product.

§ 52.3628 Sample size.

The sample size used to determine whether the requirements of these standards are met shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1-52.83) for lot grading and on-line grading, as applicable.

§ 52.3629 Lot quality requirements.

A lot of tomato juice or tomato juice from concentrate is considered as meeting the requirements for quality if:

(a) The requirements specified in Tables I or II, as applicable, are met; and

(b) The sampling plans and procedures in 7 CFR 52.1-52.83 are met.

Subpart—United States Standards for Grades of Sugarcane Molasses

SOURCE: 24 FR 8365, Oct. 15, 1959, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.3651 Product description.

Sugarcane molasses is the clean, sound, liquid product obtained by evaporating the juice of sugarcane and the removal of all or any part of the commercially crystallizable sugar.

§ 52.3652 Grades of sugarcane molasses.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of sugarcane molasses that possesses a good flavor; that meets the requirements for Brix, sugar, ash, and sulfites as outlined in Table I of this subpart; that possesses a good color; that is practically free from defects; and that scores not less than 90 points when rated in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of sugarcane molasses that possesses a reasonably good flavor; that meets the requirements for Brix, sugar, ash, and sulfites as outlined in Table I of this subpart; that possesses a reasonably good color; that is reasonably free from defects; and that scores not less than 80 points when rated in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of surgarcane molasses that possesses a fairly good flavor; that meets the requirements for Brix, sugar, ash, and sulfites as outlined in Table I of this subpart; that possesses a fairly good color; that is fairly free from defects; and that scores not less than 70 points when rated in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of sugarcane molasses that fails to meet the requirements of U.S. Grade C.

FILL OF CONTAINER

§ 52.3653 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled with molasses as full as practicable.

FACTORS OF QUALITY

§ 52.3654 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Brix solids.

(ii) Total sugar.

(iii) Ash.

(iv) Total sulfites.

(v) Flavor (palatability). (*a*) "Good flavor" means the sugarcane molasses possesses a flavor and odor characteristic of first centrifugal molasses of fancy quality.

(*b*) "Reasonably good flavor" means the sugarcane molasses possesses a flavor and odor characteristic of second centrifugal molasses of choice quality.

(*c*) "Fairly good flavor" means the sugarcane molasses possesses a flavor and odor characteristic of second centrifugal molasses of standard quality.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	50
Defects	50
Total score	100

§ 52.3655 Required Brix solids, total sugar, ash, total sulfites.

The required minimum Brix solids, minimum total sugar, maximum ash content, and maximum total sulfites for the respective grade of sugarcane molasses are given in Table I of this subpart.

§ 52.3656 Compliance with the required Brix solids and total sugar and maximum ash content.

Lot compliance with the Brix, total sugar, and ash requirements shall be determined separately for each factor, and the acceptance number prescribed in paragraph (c) of this section shall be permitted for each factor. A lot is considered as meeting the Brix, total sugar, and ash requirements for the respective grade as outlined in Table I of this subpart: *Provided,* That

(a) The average of the Brix and average of the total sugar values are equal to or greater than the applicable "minimum averages" (from all containers) in Table I; and the average of the ash values does not exceed the applicable "maximum average" (from all containers) in Table I; and

(b) None of the Brix or total sugar values are less than the applicable "minimum limits" (for individual containers) in Table I; and none of the ash values exceed the applicable "maximum limit" (for individual containers) in Table I; and

(c) The number of Brix values or the number of total sugar values that are less than the applicable "minimum average" but not less than the applicable "minimum limit" of Table I or the number of ash values that are more than the applicable "maximum average" but not more than the "maximum limit" of Table I do not exceed the acceptance number prescribed for the sample size in the indicated sampling plans contained in the regulations, §§ 52.1 through 52.87.

TABLE I—REQUIRED MINIMUM BRIX SOLIDS AND TOTAL SUGAR AND MAXIMUM ASH AND TOTAL SULFITE

Grade designation	Minimum				Maximum		
	Brix solids (percent)		Total sugar (percent)		Ash (percent)		Total sulfites (ppm)
	Average from all containers	Limit for individual container	Average from all containers	Limit for individual container	Average from all containers	Limit for individual container	Average from all containers
Grade A	79.0	78.5	63.5	63.0	5.00	5.25	200
Grade B	79.0	78.5	61.5	61.0	7.00	7.50	250
Grade C	79.0	78.5	58.0	57.0	9.00	10.00	250
SStd	Under 79.0		Under 58.0		Over 9.00		Over 250

§ 52.3657 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "45 to 50 points" means 45, 46, 47, 48, 49, or 50 points).

§ 52.3658 Color.

(a) *General.* Color has reference to the color of sugarcane molasses when examined by means of the USDA permanent glass color standards for sugarcane molasses. Information regarding these color standards may be obtained by writing to the Processed Products Standardization and Inspection Branch, Fruit and Vegetable Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington, D.C., 20250.

(b) (*A*) *classification.* Sugarcane molasses that possesses a good color may be given a score of 45 to 50 points. "Good color" means that the color is bright and typical of molasses properly prepared and processed from sound, well matured sugarcane, and is equal to or lighter in color than USDA permanent glass color standard No. 1 for sugarcane molasses.

(c) (*B*) *classification.* If the sugarcane molasses possesses a reasonably good color, a score of 40 to 44 points may be given. Sugarcane molasses that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the color is reasonably bright and is equal to or lighter in color than USDA permanent glass color standard No. 2 for sugarcane molasses.

(d) (*C*) *classification.* Sugarcane molasses that possesses a fairly good color may be given a score of 35 to 39 points. Sugarcane molasses that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the color is equal to or lighter in color than USDA permanent glass color standard No. 3 for sugarcane molasses.

(e) (*SStd*) *classification.* Sugarcane molasses that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 34 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3659 Defects.

(a) *General.* Defects refers to the cleanliness of the product and the degree of freedom from harmless extraneous material.

(b) (*A*) *classification.* Sugarcane molasses that is practically free from defects may be given a score of 45 to 50 points. "Practically free from defects" means that the appearance and edibility of the product are not affected by the presence of harmless extraneous material which may be in suspension or deposited as sediment in the container.

(c) (*B*) *classification.* If the sugarcane molasses is reasonably free from defects, a score of 40 to 44 points may be given. Sugarcane molasses that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the appearance and edibility of the product are not materially affected by the presence of harmless extraneous material which may be in suspension or deposited as sediment in the container.

(d) (*C*) *classification.* Sugarcane molasses that is fairly free from defects may be given a score of 35 to 39 points. Sugarcane molasses that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that the appearance and edibility of the product are not seriously affected by the presence of harmless extraneous material which may be in suspension or deposited as sediment in the container.

(e) (*SStd.*) *classification.* Sugarcane molasses that fails to meet the requirements of paragraph (d) of this section may be given a score of 0 to 34 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

DEFINITIONS AND METHODS OF ANALYSIS

§ 52.3660 Methods of analysis.

The analyses in this subpart, unless indicated otherwise, shall be made in accordance with the applicable methods of analyses given in Official Methods of Analysis of the Association of Official Agricultural Chemists or by any other means which give equivalent results.

§ 52.3661 Color of sugarcane molasses.

(a) The color classification of sugarcane molasses is determined by means of the USDA permanent glass color standards for sugarcane molasses as outlined in this subpart.

(b) Partially crystallized sugarcane molasses is liquefied by heating to approximately 54.4°C. (130° F.) and cooled to approximately 20° C. (68° F.) before ascertaining the color of the molasses by means of the USDA permanent glass color standards for sugarcane molasses.

§ 52.3662 Application of USDA permanent glass color standards in classifying the color of sugarcane molasses.

(a) *Sample containers.* The sample containers for use in making the visual color determination, as set forth in this subpart, are cells of colorless optical glass or plastic having an internal width of 0.100 inch with outside dimensions of approximately $1\frac{7}{16}$ inches by 3½ inches.

(b) *Comparator; viewing box.* The comparator or viewing box for the entire color range in the visual comparison test is divided into five compartments. Each compartment is provided with viewing openings approximately $1\frac{3}{16}$ inches square in the two parallel sides. The USDA permanent glass color standards are mounted in a fixed position in the front openings of compartments 1, 3, and 5 of the comparator, compartments 2 and 4 being adapted to receive the sample containers.

(c) *Cloudy suspensions.* Three cloudy suspensions are required. These are referred to as "Cloudy A," "Cloudy B," and "Cloudy C," corresponding to varying degrees of cloudiness in sugarcane molasses. The cloudy suspensions are contained in capped square bottles of colorless, transparent glass having an internal width at the center of 3.15 centimeters (1.24 inches), with outside base dimensions of approximately $1\frac{7}{16}$ inches by $1\frac{7}{16}$ inches, having a capacity of two fluid ounces.

(d) *Visual comparison test.* The color of a sample of sugarcane molasses is compared with the USDA permanent glass color standards in the following manner to determine its color classification:

(1) Place the sample of sugarcane molasses in a clean, dry sample container.

(2) Place the container filled with the sample successively in compartments 2 and 4 of the comparator and visually compare the color of the sample with that of each of the glass color standards by looking through them at a diffuse source of natural or artificial daylight.

(3) If the sample is appreciably cloudy in appearance, place a suspension of comparable cloudiness (cloudy A, cloudy B, or cloudy C) behind the permanent glass color standard to facilitate color classification.

§ 52.3663 Brix solids.

Brix solids means the applicable solids content of sugarcane molasses or the Brix value as determined by the double dilution method by means of a Brix hydrometer corrected to 20° C. (68° F.).

§ 52.3664 Ash.

Percent ash means the ash content of sugarcane molasses determined as sulfated ash.

§ 52.3665 Sulfur dioxide, p.p.m.

Sulfur dioxide, p.p.m., means the total sulfites determined by the Monier-Williams method calculated as parts per million of sulfur dioxide (SO_2).

§ 52.3666 Reducing sugars.

The percent of reducing sugars is determined by the Lane-Eynon volumetric method for reducing sugars.

§ 52.3667 Sucrose.

The percent of sucrose is determined by the Clerget or double polarization method, using invertase as the inverting agent.

§ 52.3668 Total sugar.

The percent of total sugar is the sum of the percent of reducing sugars and the percent of sucrose.

LOT INSPECTION AND CERTIFICATION

§ 52.3669 Ascertaining the grade of a lot.

The grade of a lot of sugarcane molasses covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables and Processed Products Thereof and Certain Other Processed Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3670 Score sheet for sugarcane molasses.

Size and kind of container ....
Container mark or identification ....
Label ....
Vacuum (inches) ....
Volume (liquid measure) ....
USDA color ....
Brix solids, percent ....
Reducing sugars, percent ....
Sucrose, percent ....
Total sugar, percent ....
Ash, percent ....
SO_2, p.p.m ....

Factors		Score points	
Color	50	(A)	45-50
		(B)	[1]40-44
		(C)	[1]35-39
		(SStd.)	[1]0.34
Defects	50	(A)	45-50
		(B)	[1]40-44
		(C)	[1]35-39
		(SStd.)	[1]0-34
Total score	100		

Flavor ( ) Good; ( ) Reasonably good; ( ) Fairly good; ( ) Off flavor. ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Turnip Greens With Turnips

SOURCE: 23 FR 5497, July 19, 1958, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, COLOR, PROPORTION OF INGREDIENTS, AND GRADES

§ 52.3731 Product description.

Frozen turnip greens with turnips is the product prepared from the clean, sound, succulent leaves and the clean, sound, succulent roots of the turnip plant (Brassica rapa) by washing, sorting, trimming, blanching, and proper draining, and is then frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.3732 Styles of frozen turnip greens with turnips.

(a) *General.* The style of frozen turnip greens with turnips applies to the form of the leaf material used and to the turnip root ingredient of the product. The turnip root ingredient is prepared in one of the following forms: Whole; sliced; diced; and cut.

(b) "Style I Whole Leaf" is the style of frozen turnip greens with turnips that consists of the leaf with adjacent portions of the stem, together with a single form of the turnip root ingredient.

(c) "Style II Sliced" is the style of frozen turnip greens with turnips that consists of leaves with adjacent portions of the stem which have been sliced into reasonably uniform strips, together with a single form of the turnip root ingredient.

(d) "Style III Cut or Chopped" is the style of frozen turnip greens with turnips that consists of leaves with adjacent portions of the stem which have been cut or chopped into small pieces, together with a single form of the turnip root ingredient.

§ 52.3733 Color of turnips in frozen turnip greens with turnips.

(a) White.

(b) Yellow.

§ 52.3734 Recommended proportion of ingredients.

It is recommended that frozen turnip greens with turnips consist of 50 percent or more, by weight, of turnip greens and not less than 20 percent nor more than 50 percent, by weight, of turnips.

§ 52.3735 Grades of frozen turnip greens with turnips.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen turnip greens with turnips in which the turnip ingredient is fairly uniform in size and each ingredient possesses similar varietal characteristics; possesses a good flavor; possesses a good color; is practically free from defects; possesses a good character; and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen turnip greens with turnips in which each ingredient possesses similar varietal characteristics; possesses a reasonably good flavor; possesses a reasonably good color; is reasonably free from defects; possesses a reasonably good character; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen turnip greens with turnips that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.3736 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Uniformity of size.

(ii) Varietal characteristics.

(iii) Flavor.

(iv) Proportion of ingredients.

(2) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given for each such factor is:

Factors	Points
Color	20
Defects	40
Character	40
Total score	100

(b) *Evaluation of quality.* The rating for the factors of color, defects, and character (with respect to each ingredient) and the evaluation of uniformity of size and similar varietal characteristics are determined immediately after thawing so that the product is sufficiently free from ice crystals to permit proper handling as individual units. A representative sample is cooked to ascertain the tenderness of the frozen leaf and root ingredient before final evaluation of the score for character. The flavor is also ascertained on the cooked product.

(c) *Definition of requirements not rated by score points.* (1) "Good flavor" means that the product, after cooking, has a good, normal flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(2) "Reasonably good flavor" means that the product, after cooking, may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(3) "Fairly uniform in size" means that the turnip ingredient units may vary in size but not to an extent that seriously detracts from the appearance of the product.

§ 52.3737 Ascertaining the ratings for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.3738 Color.

(a) *General.* The factor of color refers to the general brightness of the combined ingredients before and after cooking.

(b) (*A*) *classification.* Frozen turnip greens with turnips that possess a good color may be given a score of 17 to 20 points. "Good color" means that the leafy ingredient possesses a bright, practically uniform typical green color of young tender turnip greens and that the turnip ingredient possesses a practically uniform bright characteristic color for the variety of young tender turnips, which ingredients have been properly prepared and properly processed.

(c) (*B*) *classification.* Frozen turnip greens with turnips that possess a reasonably good color may be given a score of 14 to 16 points. Frozen turnip greens with turnips that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the color of the leafy ingredient is reasonably bright and typical of reasonably young and reasonably tender turnip greens and that the turnip ingredient possesses a characteristic color for the variety, which color is typical of reasonable young and reasonably tender turnips which have been properly prepared and properly processed.

(d) (*SStd.*) *classification.* Frozen turnip greens with turnips that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3739 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from sand, grit, or silt, harmless extraneous material, and from damaged leaf and turnip ingredient.

(1) "Sand, grit, or silt" means any particle of earthy material.

(2) "Harmless extraneous material" means any extraneous vegetable, substance, such as weeds or grass, that is harmless.

(3) "Damage" means damaged by yellow, brown, or other discoloration affecting any leaf or portion of leaf, stem or portion of stem, and damage by discoloration, insect injury, pathological injury, or other means affecting any leaf or unit of turnip ingredient. Minute, insignificant blemishes shall not be considered as damage.

(b) (*A*) *classification.* Frozen turnip greens with turnips that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that no grit, sand, or silt may be present that affects the appearance or edibility of the product, and that there may be present for each 10 ounces, net weight of turnip greens with turnips not more than:

(1) In whole leaf style, an aggregate of 6 inches in length of grass and weeds: *Provided,* That the total amount does not materially affect the appearance or edibility of the product.

(2) In other styles no grass or weeds or pieces of grass or weeds that materially affect the appearance or edibility of the product.

(3) An aggregate area of damage affecting 3 square inches (3" x 1") of leaves and stems or portions of leaves and stems, and 5 percent, by count, of units of turnip ingredient affected by damage: *Provided*, That damaged units do not materially affect the appearance or edibility of the product.

(c) (*B*) *classification*. Frozen turnip greens with turnips that are reasonably free from defects may be given a score of 28 to 33 points. Frozen turnip greens with turnips that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the product may contain a trace of grit, sand, or silt that does not seriously affect the appearance or edibility of the product and that there may be present for each 10 ounces, net weight, of turnip greens with turnips not more than:

(1) In whole leaf style an aggregate of 9 inches in length of grass and weeds: *Provided*, That the total amount does not seriously affect the appearance or edibility of the product.

(2) In other styles no grass or weeds or pieces of grass or weeds that seriously affect the appearance or edibility of the product.

(3) An aggregate area of damage affecting 6 square inches (6" x 1") of leaves and stems or portions of leaves and stems, and 10 percent, by count, of units of turnip ingredient affected by damage: *Provided*, That damaged units do not seriously affect the appearance or edibility of the product.

(d) (*SStd.*) *classification*. Frozen turnip greens with turnips that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3740 Character.

(a) *General*. The factor of character refers to the tenderness and texture of the product and the degree of freedom from fibrous or pithy turnip material.

(b) (*A*) *classification*. Frozen turnip greens with turnips that possess a good character may be given a score of 34 to 40 points. "Good character" means that the leafy ingredient is tender and practically free from coarse or tough leaves and stems and that the turnip ingredient possesses a tender texture and is practically from from fibrous or pithy units.

(c) (*B*) *classification*. Frozen turnip greens with turnips that possess a reasonably good character may be given a score of 28 to 33 points. Frozen turnip greens with turnips that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the leafy ingredient is reasonably tender and reasonably free from coarse or tough leaves and stems and that the turnip ingredient possesses a reasonably tender texture and is reasonably free from fibrous or pithy units.

(d) (*SStd.*) *classification*. Frozen turnip greens with turnips that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATION AND METHODS OF ANALYSIS

§ 52.3741 Explanation and methods of analysis.

(a) The proportion of each of the ingredients is determined on the thawed product by the following procedure:

(1) Separate the leafy ingredient from the turnip ingredient from all of the containers in the sample.

(2) Composite the leafy ingredient and weigh.

(3) Composite the turnip ingredient and weigh.

(4) Add the weights of each of the ingredients to obtain the total weight of the combined ingredients in all of the containers in the sample.

(5) Calculate the percent of each of the ingredients by dividing the total weight of the combined ingredients into the composite weight of each ingredient and multiply by 100.

(b) Compliance with the requirements for proportions of ingredients will be determined by averaging the percent, by weight, of each ingredient in all of the containers in the sample: *Provided*, That any deviation from the recommended proportion of ingredients in any container is within the limits of good commercial practice.

LOT INSPECTION AND CERTIFICATION

§ 52.3742 Ascertaining the grade of a lot.

The grade of a lot of frozen turnip greens with turnips covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3743 Score sheet for frozen turnip greens with turnips.

Size and kind of container ....

Container marks or identification ....

Label ....

Net weight (ounces) ....

Style of product ....

Turnips (form and color) ....

Proportion of ingredients:

Turnip greens % ....

Turnips % ....

Uniformity of turnip ingredient (Whole, Sliced, Diced, Cut) Meets A——Fails A ....

Factors		Score points	
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd.)	[1] 0-13
Defects	40	(A)	34-40
		(B)	[1] 28-30
		(SStd.)	[1] 0-27
Character	40	(A)	34-40
		(B)	[1] 28-33
		(SStd.)	[1] 0-27
Total score	100		

Flavor ....

Varietal characteristics ....

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Ripe Olives[1]

SOURCE: 42 FR 38585, July 29, 1977, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.3751 Product description.

Canned ripe olives are prepared from properly matured olives which have first been properly treated to remove the characteristic bitterness; are packed in a solution of sodium chloride, with or without spices, and are sufficiently processed by heat in hermetically sealed containers. Canned olives which are not oxidized in processing and which possess a tan to light bronze color indicative of preparation from olives of advanced maturity and commonly referred to as "tree-ripened" or "home-cured" are not covered by the standards in this subpart.

§ 52.3752 Types of canned ripe olives.

Canned ripe olives are processed as two distinct types. Unless a specific type is stated in this subpart, "canned ripe olives" refers to olives of either "ripe-type" or "green-ripe type."

(a) *Ripe type.* "Ripe type" olives are those which have been treated and oxidized in processing to produce a typical dark brown to black color.

(b) *Green-ripe type.* "Green-ripe type" olives are those which have not been oxidized in processing; which range in color from yellow-green; green-yellow or other greenish casts; and which may be mottled.

§ 52.3753 Styles of canned ripe olives.

(a) *Whole.* "Whole" olives are those which have not been pitted.

(b) *Pitted.* "Pitted" olives are those from which pits have been removed.

(c) *Halved.* "Halved" olives are pitted olives in which each olive is cut lengthwise into two approximately equal parts.

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug and Cosmetic Act, or with applicable State laws and regulations.

(d) *Segmented.* "Segmented" olives are pitted olives in which each olive is cut lengthwise into three or more approximately equal parts.

(e) *Sliced.* "Sliced" olives consist of parallel slices of fairly uniform thickness prepared from pitted olives.

(f) *Chopped.* "Chopped" olives are random-size cut pieces or cut bits prepared from pitted olives.

(g) *Broken pitted.* "Broken pitted" olives consist substantially of large pieces that may have been broken in pitting but have not been sliced or cut.

§ 52.3754 Size designations for whole and pitted styles.

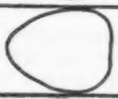
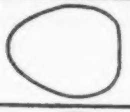
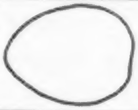
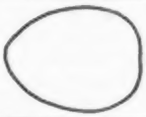
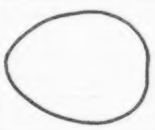
(a) *General.* (1) "Average count" for canned whole ripe olives is determined from all containers in the sample and is calculated on the basis of the drained weight of the olives.

(2) Diameters of canned whole and pitted ripe olives are determined by measuring the smallest diameters at the largest circumferences at right angles to the longitudinal axes of the olives. The longitudinal axis is a line running from the stem to the apex of the olive.

(b) *Size determination.* Size of canned whole or pitted olives shall conform to the applicable count per pound range indicated in Table I in the case of whole olives, or conform closely to the applicable illustration in Table I in the case of pitted olives. When the count per pound of whole olives falls between two count ranges, the size designation shall be the next smaller size.

TABLE I

SIZE - CANNED WHOLE AND PITTED RIPE OLIVES

DESIGNATION	COUNT PER POUND	ILLUSTRATION	APPROXIMATE DIAMETER RANGE ILLUSTRATED (mm)
SMALL	128 - 140		16 - 17
MEDIUM	106 - 121		17 - 19
LARGE	91 - 105		19 - 20
EXTRA LARGE	65 - 88		20 - 22
JUMBO	51 - 60		22 - 24
COLOSSAL	41 - 50		24 - 26
SUPER COLOSSAL	40 or less		26 and over

[42 FR 38585, July 29, 1977, as amended at 46 FR 39564, Aug. 4, 1981. Redesignated at 46 FR 63203, Dec. 31, 1981, and amended at 48 FR 41012, Sept. 13, 1983]

§ 52.3755 Minimum drained weights.

(a) *General.* (1) The minimum drained weights for the various applicable styles in Table II and III are not incorporated in the grade of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for determining drained weight.* The drained weight of canned ripe olives is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing eight meshes to the inch (2.3 mm (0.0937 inch), ±3 percent, square openings) so as to distribute the product evenly over the sieve. Without shifting the product, incline the sieve at an angle of 17 degrees to 20 degrees to facilitate drainage and allow to drain for two minutes. The weight of drained olives is the weight of the sieve and product less the weight of the dry sieve. A sieve 20 mm (8 inches) in diameter is used for containers with total contents of 1.5 kg (3.3 lbs) and less, and a sieve 30 mm (12 inches) in diameter is used for containers with total contents greater than 1.5 kg (3.3 lbs).

(c) *Compliance with minimum drained weights.* A lot of canned ripe olives is considered as meeting the minimum drained weights if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample is equal to or greater than the acceptance value for drained weights for the size (designated as "**X_2**," in Tables II and III); and

(2) There shall be no unreasonable shortage in any individual container.

TABLE II—ACCEPTANCE VALUES FOR DRAINED WEIGHTS—WHOLE

	211 X 304		300 X 407		603 X 700	
	$\bar{X}d$ ounces	$\bar{X}d$ grams	$\bar{X}d$ ounces	$\bar{X}d$ grams	$\bar{X}d$ ounces	$\bar{X}d$ grams
Small	4.5	127.5	7.75	219.7	66.0	1871.1
Medium	4.5	127.5	7.75	219.7	66.0	1871.1
Large	4.5	127.5	7.75	219.7	66.0	1871.1
Extra large	4.5	127.5	7.5	212.6	66.0	1871.1
Jumbo	4.0	113.4	7.25	205.5	64.0	1814.4
Colossal	4.0	113.4	7.25	205.5	64.0	1814.4
Super colossal	4.0	113.4	7.25	205.5	64.0	1814.4

TABLE II—ACCEPTANCE VALUES FOR DRAINED WEIGHTS—PITTED

	211 X 304		300 X 407		603 X 700	
	$\bar{X}d$ ounces	$\bar{X}d$ grams	$\bar{X}d$ ounces	$\bar{X}d$ grams	$\bar{X}d$ ounces	$\bar{X}d$ grams
Small	3.25	92.1	6.0	170.1	51.0	1445.8
Medium	3.25	92.1	6.0	170.1	51.0	1445.8
Large	3.5	99.2	6.0	170.1	51.0	1445.8
Extra large	3.5	99.2	6.0	170.1	51.0	1445.8
Jumbo	3.25	92.1	5.75	163.0	49.0	1389.1
Colossal	3.25	92.1	5.75	163.0	49.0	1389.1
Super colossal	3.25	92.1	5.75	163.0	49.0	1389.1

TABLE III—ACCEPTANCE VALUE FOR DRAINED WEIGHTS (OUNCES)

	Water capacity oz avdp.	Halved, segmented, sliced		Chopped	
		X_d	LL	X_d	LL
200 x 214		2.3	1.9	4.2	3.9
211 x 200	4.9	2.3	1.9	4.2	3.9
305 x 109		3.0	2.6	5.5	5.2
307 x 113		3.0	2.6	5.5	5.2
211 x 304	8.65	3.8	3.4	7.6	7.2
No. 300 (300 x 407)	15.2	6.5	6.1	13.3	12.7
No. 10 (603 x 700)	109.45	55.0	53.4	90.0	87.8
No. 10 (brine pack)				64.0	62.4
BROKEN PITTED					
No. 300 (300 x 407)	15.2	5.6	4.7		
No. 10 (603 x 700)	109.45	51.0	48.8		

TABLE III—ACCEPTANCE VALUE FOR DRAINED WEIGHTS (GRAMS)

	Water Capacity	Halved, segmented, Sliced		Chopped	
		X_c	LL	X_c	LL
200 x 214		65.2	53.9	119.1	110.6
211 x 200	138.9	65.2	53.9	119.1	110.6
305 x 109		85.0	73.7	155.9	147.4
307 x 113		85.0	73.7	155.9	147.4
211 x 304	245.2	107.7	96.4	215.4	204.1
No. 300 (300 x 407)	430.9	184.2	172.9	377.0	360.0
No. 10 (603 x 700)	3102.8	1559.2	1513.8	2551.4	2460.0
No. 10 (brine pack)				1814.3	1780.0
BROKEN PITTED					
No. 300 (300 x 407)	430.9	158.8	133.2		
No. 10 (603 x 700)	3102.8	1445.8	1383.4		

[42 FR 38585, July 29, 1977; 42 FR 44542, Sept. 6, 1977, as amended at 46 FR 39566, Aug. 4, 1981. Redesignated at 46 FR 63203, Dec. 31, 1981]

§ 52.3756 Grades of canned ripe olives.

(a) *U.S. Grade A* is the quality of canned ripe olives of whole, pitted, halved, segmented, sliced, and chopped styles that has a good flavor, that has a good color, that is practically free from defects, that has a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 90 points: *Provided*, That such canned ripe olives may have a reasonably good color if the total score is not less than 90 points; and further *Provided*, That in the styles of whole and pitted olives, the variation in diameters does not exceed 4 mm, and of the 90 percent, by count, of the most uniform in size, the diameter of the largest does not exceed the diameter of the smallest by more than 3 mm.

(b) *U.S. Grade B* is the quality of canned ripe olives of whole, pitted, halved, segmented, sliced, and chopped styles that has a good flavor, that has a reasonably good color, that is reasonably free from defects, that has a reasonably good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 80 points: *Provided*, That for the styles of whole and pitted olives, the variation in diameters does not exceed 8 mm, and of the 80 percent, by count, of the most uniform in size, the diameter of the largest does not exceed the diameter of the smallest by more than 4 mm.

(c) *U.S. Grade C* is the quality of canned ripe olives of whole, pitted, halved, segmented, sliced, chopped, and broken pitted styles that has a reasonably good flavor, that has a fairly good color, that is fairly free from defects, that has a fairly good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 70 points; *Provided*, That for the styles of whole and pitted olives, of the 60 percent, by count, of the most uniform in size, the diameter of the largest does not exceed the diameter of the smallest by more that 4 mm.

(d) "Substandard" is the quality of canned ripe olives of any style that fail to meet the applicable requirements for U.S. Grade C.

[42 FR 38585, July 29, 1977. Redesignated at 46 FR 63203, Dec. 31, 1981 and amended at 48 FR 41013, Sept. 13, 1983]

§ 52.3757 Standard sample unit size.

Compliance with requirements for the various quality factors except "size designation" is based on the following standard sample unit size for the applicable style:

(a) *Whole and pitted*—50 olives.

(b) *Halved*—100 units.

(c) *All other styles*—255 g (9 ounces).

§ 52.3758 Determining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.* (i) Flavor; (ii) Uniformity of size (styles of whole and pitted only).

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
(i) Color	30
(ii) Absence of defects	40
(iii) Character	30
Total score	100

(b) *Definition of flavor*—(1) *Good flavor.* (i) "Good flavor" in ripe type means a distinctive flavor characteristic of ripe type olives (including that of properly spiced olives) which have been properly prepared and processed and which are free from objectionable flavors of any kind.

(ii) "Good Flavor" in green-ripe type means a distinctive mellow flavor characteristic of green-ripe type olives which have been properly prepared and processed and which are free from objectionable flavors of any kind.

(2) *Reasonably good flavor.* "Reasonably good flavor" in either ripe type or green-ripe type (including that of properly spiced olives) means that the flavor may be slightly lacking in distinctly characteristic flavor for the respective type but the olives are free from objectionable flavors of any kind.

§ 52.3759 Determining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example "27 to 30 points" means 27, 28, 29, and 30 points).

§ 52.3760 Color.

(a) *General.* The evaluation of color shall be determined within five minutes after the olives are removed from the container and is based upon the uniformity of the exterior color or general appearance as to color of the olives within the container. The evaluation of color in "halved" style is based on the uncut surfaces.

(b) *Color measurement of ripe type.* The color of ripe type is determined by comparison with a spinning disc of variations in percentages of the following Munsell color discs: Red (5R 4/14), Yellow (2.5Y 8/12), and Black (N/1 Glossy).

(c) *Composite color standards.* Composite USDA Color Standards for Canned Ripe Olives are available and are comparable to the colors produced by the spinning discs.

(d) *Color appearance of green-ripe type.* Normal color for green-ripe type olives is yellow-green, green-yellow, or other greenish casts, any of which may have a mottled appearance that is typical of green-ripe type olives. Off-color means dark brown, dark purple or black olives.

(e) The USDA spinning color discs and the USDA composite color standards cited in paragraphs (b) and (c) of this section are available from the USDA licensed supplier:

Munsell Color Company, Inc., 2441 North Calvert Street, Baltimore, Md. 21218.

(f) *Grade A.* Canned ripe olives that have a good color may be given a score of 27 to 30 points. "Good color" has the following meanings with respect to the applicable type and style:

(1) *Ripe type*—(i) *Whole; pitted; halved.* The olives or units have a practically uniform black or dark brown color. Not less than 90 percent, by count, of the olives or units have a color equal to or darker than the appropriate USDA Composite Color Standard or that produced by spinning the Munsell discs specified in paragraph (b) of this section in the following combination: 3½ percent Red, 3½ percent Yellow, and 93 percent Black.

(ii) *Segmented; sliced, chopped.* The general color impression of the olive as a mass is normal and typical of these styles prepared from olives with good color.

(2) *Green-ripe type.* The general color appearance of the olives shall be normal. Not less than 90 percent, by count, shall be practically uniform in such normal color for the type, and no off-color olives may be present.

(g) *Grade B.* If the canned ripe olives have a reasonably good color, a score of 24 to 26 points may be given. "Reasonably good color" has the following meanings with respect to the applicable type and style:

(1) *Ripe type*—(i) *Whole; pitted; halved.* The olives or units have a reasonably uniform black, dark brown or reddish-brown color. Not less than 80 percent, by count, of the olives or units have a color equal to or darker than the appropriate USDA Composite Color Standard or that produced by spinning the Munsell color discs specified in paragraph (b) of this section in the following combination: 6 percent Red, 6 percent Yellow, and 88 percent Black.

(ii) *Segmented; sliced; chopped.* The general color impression of the olives as a mass is normal and typical of these styles prepared from olives with reasonably good color.

(2) *Green-ripe type.* The general color appearance of the olives shall be normal. Not less than 80 percent, by count, shall be reasonably uniform in such normal color for the type, and no off-color olives may be present.

(h) *Grade C.* If the ripe olives have a fairly good color, a score of 21 to 23 points may be given. Canned ripe olives that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly good color" has the following meanings with respect to the applicable type and style:

(1) *Ripe type*—(i) *Whole; pitted; halved.* The olives or units have a fairly uniform black, dark brown or reddish-brown color. Not less than 60 percent, by count, of the olives or units have a color equal to or darker than the appropriate USDA Composite Color Standard or that produced by spinning the Munsell color discs specified in paragraph (b) of this section in the following combination: 6 percent Red, 6 percent Yellow, and 88 percent Black.

(ii) *Segmented; sliced; chopped.* The general color impression of the olives as a mass is normal and typical of these styles prepared from olives of fairly good color.

(iii) *Broken pitted.* The general color impression of the olives as a mass is normal and may be variable, but is typical of this style prepared from olives of good, reasonably good, or fairly good color.

(2) *Green-ripe type.* The general color impression of the olives shall be normal but may vary markedly for the type. No more than 10 percent, by count, of off-color olives may be present.

(i) *Substandard (SStd.).* Canned ripe olives that are abnormal in color for any reason or that fail to meet the requirements of paragraph (h) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3761 Defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous vegetable material, stems, and portions thereof, blemishes, wrinkles, mutilated olives, and from any other defects which affect the appearance or edibility of the product.

(b) *Definition of defects*—(1) *Blemishes* mean dark-colored surface marks in either ripe type or green-ripe olives which may or may not penetrate into the flesh. Olives or pieces of olives affected by blemishes are classified as follows:

(i) *Minor blemishes* mean surface discolorations on olives or pieces of olives which individually or collectively materially affect the appearance of the unit.

(ii) *Major blemishes* mean surface discolorations or black flesh (oxidized) on olives or pieces of olives which may or may not be associated with a soft texture below the skin and which individually or collectively seriously affect the appearance or edibility of the unit.

(iii) *Severe blemishes* mean dark brown, dark purple, or black surface areas on olives or pieces of olives of the green-ripe type; or any other blemishes, whether or not specifically defined, which severely affect the appearance or edibility of the unit.

(2) *Blowout* refers to a soft pitted olive in which the pit has been pushed out instead of cut out leaving an irregular ring of flesh that materially affects its appearance.

(3) *Broken piece* in halved, segmented, and sliced style olives means any piece of olive flesh that appears to be less than three-fourths of a full unit. Also included are poorly cut units and end slices less than one-half the average size slice.

(4) *Cross pitted* refers to olives pitted along an axis other than the stem-flower axis. A defect is a unit where the angle of these two axes exceeds 45 degrees.

(5) *Harmless extraneous vegetable material.* Harmless extraneous vegetable material (HEVM), harmless extraneous material (HEM), and extraneous vegetable material (EVM), are synonymous terms and mean any vegetable substance that is harmless.

(6) *Mechanically damaged* means a unit in whole, pitted, and halved styles that is punctured, cut or damaged by means other than pitting so that its appearance is materially affected.

(7) *Misshapen* refers to an olive that does not have a normal shape for a given variety.

(8) *Mutilated* refers to an olive in whole or pitted styles that is so pitter-torn or damaged by other means that the entire pit cavity is exposed or the appearance of the olive is seriously affected.

(9) *Obvious split pit* means a pit in an olive that can be determined visually as split.

(10) *Pitter damage* means a loss of skin and flesh from a pitted olive caused by the pitter on the cut end exceeding the area of a circle 3 mm in diameter but is not mutilated.

(11) *Plunger damage* means a loss of skin and flesh from a pitted olive equal to or exceeding the area of a circle 5 mm in diameter.

(12) *Stem* means a stem that measures 3 mm or more from the shoulder of the olive. Stems are classified as follows:

(i) *Minor stem* is a stem that measures more than 3 mm but not more than 4 mm from the shoulder of the olive.

(ii) *Major stem* is a stem that measures more than 4 mm from the shoulder of the olive.

(iii) *Detached stem,* when it measures 4 mm or more, is a defect which shall be scored as a minor stem for whole pitted, halved, and broken pitted style olives and a major stem for segmented, sliced, and chopped style olives.

(13) *Wrinkles* are grooves 0.5 mm or more in width. Classification of wrinkles shall be determined immediately after removing surface moisture and any increase in wrinkles due to dehydration after removing from the container shall not be considered. Olives or pieces of olives affected by wrinkles are classified as follows:

(i) *Minor wrinkles* are wrinkles which collectively do not more than materially affect the appearance of the unit.

(ii) *Major wrinkles* are wrinkles which collectively more than materially affect the appearance of the unit.

(c) *Grade A.* Canned ripe olives of whole, pitted, halved, segmented, sliced, and chopped styles that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that any defects present, but not specifically limited in Table IV, may not more than slightly affect the appearance or edibility of the olives; and, in addition, specified defects may be present in all other styles except "broken pitted" not to exceed the allowances for grade A provided in Table IV.

(d) *Grade B.* If canned ripe olives of whole, pitted, halved, segmented, sliced, and chopped styles are reasonably free from defects, a score of 32 to 35 points may be given. Canned ripe olives that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that any defects present but not specifically limited in Table V may not more than materially affect the appearance

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or edibility of the olives; and in addition, specified defects may be present in all other styles except "broken pitted" not to exceed the allowances for grade B provided in Table V.

(e) *Grade C.* If canned ripe olives of whole, pitted, halved, segmented, sliced, chopped, and broken pitted styles are fairly free from defects, a score of 28 to 31 points may be given. Canned ripe olives that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present but not specifically limited in Table VI may more than materially affect the appearance and edibility of the olives; and in addition, specified defects may be present in all other styles not to exceed the allowances for grade C provided in Table VI.

(f) *Substandard (SStd.).* Canned ripe olives that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE IV—LIMITS FOR DEFECTS IN GRADE A

	Whole per 50 olives	Pitted per 50 olives	Halved per 100 halves	Segmented per 255 g (9 oz)	Sliced per 255 g (9 oz)	Chopped per 255 g (9 oz)
HEVM, HEM, or EVM	1	1	1	Practically free	Practically free	Practically free.
Stems:						
Minor and major stems incl	2	2	2			
Major stems	1	1	1	Practically free	Practically free	Practically free.
Minor and major blemishes, minor and major wrinkles and mutilated	5	5	10	Practically free	Practically free	Practically free.
Provided:						
Major blemishes, major wrinkles do not exceed	2	2	5			
Further Provided: Multilated do not exceed	1	1				
Broken pieces and poorly cut units			8	Practically free	Practically free	
Mechanical damage	2	2	5			
Blowouts, cross pitted, plunger and pitter damage		5				
Obvious split pit or misshapen	2					
Severe blemishes (green-ripe type only)	0	0	0			

TABLE V—LIMITS FOR DEFECTS IN GRADE B

	Whole per 50 olives	Pitted per 50 olives	Halved per 100 halves	Segmented per 255 g (9oz)	Sliced per 255 g (9oz)	Chopped per 255 g (9oz)
HEVM, HEM or EVM	1	1	1	Reasonably free	Reasonably free	Reasonably free.
Stems:						
Minor and major stems incl	3	3	3			
Major stems	1	1	1	Reasonably free	Reasonably free	Reasonably free.
Minor and major blemishes, minor and major wrinkles and mutilated	10	10	20	Reasonably free	Reasonably free	Reasonably free.
Provided:						
Major blemishes, major wrinkles do not exceed	5	5	10			
Further provided:						
Mutilated do not exceed	2	2				
Broken pieces and poorly cut units			15	Reasonably free	Reasonably free	
Mechanical damage	5	5	10			
Blowouts, cross pitted, plunger and pitter damage		10				
Obvious split pit or misshapen	5					
Severe blemishes (green-ripe type only)	0	0	0			

TABLE VI—LIMITS FOR DEFECTS IN GRADE C

	Whole per 50 olives	Pitted per 50 olives	Halved per 100 halved	Segmented per 255 g (9 oz.)	Sliced per 255 g (9 oz.)	Chopped per 255 g (9 oz.)	Broken Pitted per 255 g (9 oz.)
HEVM, HEM, or EVM	1	1	1	Fairly free	Fairly free	Fairly free	2
Minor and major stems inclusive	4	4	4				
Major stems	2	2	2	Fairly free	Fairly free	Fairly free	4
Minor, major blemishes, major, minor wrinkles	No limit	No limit	No limit	Fairly free	Fairly free	Fairly free	No limit
Provided:							
Major blemishes, major wrinkles do not exceed	13	13	25				51 g[1]
Further Provided:							
Multilated, major blemish and major wrinkles do not exceed	15	15	30				
Multilated do not exceed	5	5	10				No limit
Broken pieces and poorly cut units			25	Fairly free	Fairly free		
Mechanical damage	10	10	20				
Blowouts, cross pitted, plunger and pitter damaged		15					
Obvious split pit or misshapen	No limit						
Severe blemishes (green-ripe type only)	3	3	3	0	0	0	

[1] Major blemishes only

[48 FR 41013, Sept. 13, 1983]

§ 52.3762 Character.

(a) *General.* The factor of character refers to the firmness, tenderness, and texture characteristics for the variety and type.

(b) *Grade A.* Canned ripe olives of whole, pitted, halved, segmented, sliced, and chopped styles that have a good character may be given a score of 27 to 30 points. "Good character" means that, for the type, the olives have a fleshy texture characteristic for the variety and size; that not less than 95 percent, by count, of whole, pitted and halved olives and by weight of other style olives are practically uniform in texture and are tender but not soft. The remaining 5 percent may be soft but not excessively soft.

(c) *Grade B.* If canned ripe olives of whole, pitted, halved, segmented, sliced and chopped styles have a reasonably good character, a score of 24 to 26 points may be given. Canned ripe olives that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that, for the type, the olives generally have a fleshy texture characteristic for the variety and size; that not less than 90 percent, by count, of whole, pitted and halved olives, and by weight of other style olives are practically uniform in texture and are tender but not soft. The 10 percent may be soft but not more than ½, or 5 percent, may be excessively soft.

(d) *Grade C.* If canned ripe olives of whole, pitted, halved, segmented, sliced, chopped and broken pitted styles have a fairly good character, a score of 21 to 23 points may be given. Canned ripe olives that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the olives generally have a fleshy texture characteristic for the variety and size; that not less than 80 percent, by count, of whole, pitted and halved olives and by weight of other style olives are practically uniform in texture and are tender but not soft. The remaining 20 percent may be soft but not more than ½, or 10 percent, may be excessively soft.

(e) *Substandard (SStd).* Canned ripe olives that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3763 Determining the grade of a lot.

The grade of a lot of canned ripe olives covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.83).

§ 52.3764 Score sheet.

Number, size and kind of container ....
Label (including size declaration) ....
Container mark or identification ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Size ....
Style ....
Average count per pound (whole style) ....

Factors		Score Points	
Color	30	(A)	27-30
		(B)	24-26
		(C)	[1]21-23
		(SStd.)	[1]0-20
Absence of defects	40	(A)	36-40
		(B)	[1]32-35
		(C)	[1]28-31
		(SStd.)	[1]0-27
Character	30	(A)	27-30
		(B)	[1]24-26
		(C)	[1]21-23
		(SStd.)	[1]0-20
Total Score	100		

Flavor ( ) Good ( ) Reasonably good ( ) Off ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Fruits for Salad

SOURCE: 38 FR 13359, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.3831 Product description.

"Canned fruits for salad" (or "canned salad fruits" or "canned fruit salad") for the purposes of this subpart is the product consisting of units of properly prepared apricots, yellow clingstone peaches, pears, pineapple, cherries, and/or grapes in the forms (or styles), and proportions as specified in table 1 of this subpart. The product is packed in a suitable liquid medium with or without the addition of nutritive sweetening ingredients, artificial sweetening ingredients, or other ingredients permissible under the Federal Food, Drug, and Cosmetic Act, and is processed by heat to assure preservation of the product in hermetically sealed containers.

§ 52.3832 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned fruits for salad in which each fruit ingredient possesses similar varietal characteristics; in which the fruit ingredients possess a good color, are practically uniform in count and size, are practically free from defects, possess a good character, possess a normal flavor and odor; and that score not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of canned fruits for salad in which each fruit ingredient possesses similar varietal characteristics; in which the fruit ingredients possess a reasonably good color, may be irregular in count but are fairly uniform in size, are reasonably free from defects, possess a reasonably good character, possess a normal flavor and odor; and that score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned fruits for salad that fail to meet the requirements of U.S. Grade B.

PROPORTIONS AND FORMS OF FRUIT

§ 52.3833 Proportion and forms of fruit.

Canned fruits for salad shall consist of the kinds of fruits in the forms (styles) and proportions as specified in table I of this subpart.

TABLE I

Fruit and forms (or styles)	Proportion (percent)[1]	
	Not less than—	Not more than—
Apricots: Unpeeled quarters; or unpeeled halves; or peeled quarters; or peeled halves	15	30
Yellow clingstone peaches: Peeled quarters; or peeled slices	23	46
Pears: Peeled quarters; or peeled slices	19	38
Pineapple: Wedge-shaped segments from slices	8	16
Cherries, whole: Artificially colored red; or artificially colored red and artificially flavored	3	6
Grapes, whole: Natural, seedless	6	12

[1] Percentages of each fruit based on the average drained weight from the containers examined: *Provided*, That the variability is within the range of good commercial practice.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.3834 Liquid media and Brix measurements.

Cutout requirements for liquid media in canned fruits for salad are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The cutout Brix measurements, as applicable, for the respective designations are as follows:

Designations	Brix measurement
Extra heavy sirup or extra heavy fruit juice sirup.	22° or more but less than 35°.
Heavy sirup or heavy fruit juice sirup.	18° or more but less than 22°.
Light sirup or light fruit juice sirup.	14° or more but less than 18°.
In water	No requirement.
In fruit juice	No requirement.

§ 52.3835 Recommended fill of container.

The recommended fill of container for canned fruits for salad is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be as full of the fruit ingredients as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.3836 Recommended minimum drained weight.

(a) *General.* The minimum drained weight recommendations in table II of this subpart are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining drained weight.* The drained weight of canned fruits for salad is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch ±3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and fruits less the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of No. 3 size cans (404 × 414) and smaller, and a sieve 12 inches in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definitions of symbols.* (1) X_d = the average drained weight of all the sample units in the sample.

(2) LL = the lower limit for drained weights of individual sample units.

(d) *Compliance with recommended drained weights.* A lot of canned fruits for salad is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended minimum average drained weight (designated as "X_d" in table II); and

(2) The number of sample units which fail to meet the recommended drained weight lower limit for individuals (designated as "LL" in table II) does not exceed the applicable acceptance number specified in the single sampling plan of table III.

TABLE II—RECOMMENDED MINIMUM DRAINED WEIGHTS

Container designations (metal, unless otherwise stated)	Container size—overall dimensions		Overflow capacity (fluid ozs)	In any liquid medium (ounces)	
	Diameter (in.)	Height (in.)		LL	X_d
8Z tall	211	304		4.7	5.2
8 oz glass			8.2	4.7	5.2
No. 300	300	407		8.3	9.0
No. 1 tall	301	411		9.3	10.0
No. 303	303	406		9.3	10.0
No. 303 glass			17.0	9.3	10.0
No. 2	307	409		11.6	12.5
No. 2½	401	411		16.9	18.0
No. 2½ glass			28.35	16.9	18.0
No. 10	603	700		62.4	64.5

TABLE III—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	3	21	29	38	48	60	72
Acceptance No	0	1	2	3	4	5	6	7	8

§ 52.3837 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations specified in table IV are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of the grades.

(b) *Method for ascertaining fill weight.* Fill weight is determined in accordance with the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

$\bar{X}'_{min}$ means the minimum lot average fill weight.

$LWL_{\bar{x}}$ means the lower warning limit for subgroup averages.

$LRL_{\bar{x}}$ means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

$\bar{R}'$ means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the Sampling Allowance Chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE IV—RECOMMENDED FILL WEIGHT VALUES FOR CANNED FRUITS FOR SALAD

[Ounces]

Container designation (metal unless otherwise designated)	$\bar{X}'_{min}$	$LWL_{\bar{X}}$	$LRL_{\bar{X}}$	LWL	LRL	$\bar{R}'$	R_{max}	Sampling allowance code
8Z tall	5.4	5.0	4.8	4.6	4.2	0.9	2.0	G.
8 oz glass	5.4	5.0	4.8	4.6	4.2	.9	2.0	G.
No. 300	9.6	9.1	8.9	8.6	8.1	1.2	2.5	I.
No. 1 tall	10.6	10.1	9.8	9.5	8.9	1.3	2.7	J.
No. 303	10.6	10.1	9.8	9.5	8.9	1.3	2.7	J.
No. 303 glass	10.6	10.1	9.8	9.5	8.9	1.3	2.7	J.
No. 2	12.8	12.2	11.9	11.5	10.8	1.5	3.2	L.
No. 2½	18.7	18.0	17.7	17.2	16.4	1.7	3.7	N.
No. 2½ glass	18.7	18.0	17.7	17.2	16.4	1.7	3.7	N
No. 10	70.5	69.2	68.6	67.7	66.3	3.3	6.9	W.

FACTORS OF QUALITY

§ 52.3838 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
(i) Color	20
(ii) Uniformity of count and size	20
(iii) Absence of defects	30
(iv) Character	30
Total score	100

(b) *Definition of normal flavor and odor.* "Normal flavor and odor" means that the individual fruits may lack the distinctive flavor and odor of each fruit ingredient but that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.3839 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means "17, 18, 19, or 20 points").

§ 52.3840 Color.

(a) (*A*) *classification.* Canned fruits for salad that possess a good color may be given a score of 17 to 20 points. "Good color" means that each fruit ingredient possesses a reasonably uniform typical color that is bright and characteristic of at least reasonably well-matured (or ripened) fruit that has been properly prepared and processed; that the fruit ingredients may be no more than slightly affected by pink staining; that none of the fruit ingredients are dull or off color for reasons other than being slightly affected by pink staining; and that not more than 10 percent, by count, of all the units may possess a fairly good color; *Provided*, That not more than 20 percent, by count, of any one fruit may possess a fairly good color.

(b) (*B*) *classification.* If the canned fruits for salad possess a reasonably good color, a score of 14 to 16 points may be given. Canned fruits for salad that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that each fruit ingredient possesses a fairly uniform and fairly good typical color that is characteristic of at least fairly well-matured (or ripened) fruit that has been properly prepared and processed; that the fruit ingredients may be more than slightly affected by pink staining but not to the extent that the appearance is materially affected by this cause but none of the fruit ingredients may be off color for reasons other than staining or dullness within these limits; and that not more than 10 percent, by count of all the units may fail to meet such reasonably good color or may be dull in color: *Provided*, That not more than 20 percent, by count, of any one fruit may be of such color.

(c) (*SStd*) *classification.* Canned fruits for salad that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3841 Uniformity of count and size.

(a) (*A*) *classification.* Canned fruits for salad that are practically uniform in count and size may be given a score of 17 to 20 points.

(1) "Practically uniform in count" means the minimum number of units of fruit as specified in table V of this subpart.

(2) "Practically uniform in size" means with respect to the individual fruits within each container; and excluding cherries or grapes that may be present:

(i) *Apricots.* Halves or quarters are very symmetrical; and the weight of the largest full-size half does not exceed the weight of the smallest full-size half by more than 75 percent.

(ii) *Pears or peaches (quarters).* Quarters are very symmetrical; the weight of the largest full-size quarter does not exceed the weight of the smallest full-size quarter by more than 60 percent.

(iii) *Peaches (slices).* Not more than 5 percent, by count, of the units may be partial slices, slivers, and slabs; and any variation in the size and symmetry of normal slices does not affect more than slightly the appearance of the product.

(iv) *Pears (slices).* Not more than 10 percent, by count, of the units may vary noticeably from the uniform shape of slices.

(v) *Pineapple (wedges).* Not more than a total of 10 percent, by count, of the units may vary noticeably in measurement of the outside arc of the wedges, may be less than five-sixteenths inch or more than one-half inch in thickness, and may be less than eleven-sixteenths inch or more than 1¼ inches in length.

(b) (*B*) *classification.* If the canned fruits for salad are irregular in count, or fairly uniform in size, a score of 14 to 16 points may be given. Canned fruits for salad that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(1) "Irregular in count" means that the canned fruits for salad (within the container) fail to meet the applicable count requirements of the (A) classification (paragraph (a) of this section).

(2) "Fairly uniform in size" means with respect to the individual fruit within each container; and excluding cherries or grapes that may be present:

(i) *Apricots.* Units may vary in size and thickness; the weight of the largest full-size half may be not more than twice the weight of the smallest full-size half.

(ii) *Pears or peaches (quarters).* Quarters may vary in size and thickness; the weight of the largest full-size quarter may be not more than twice the weight of the smallest full-size quarter.

(iii) *Peaches (slices)*. Not more than 20 percent, by count, of the units may be partial slices, slivers, and slabs; and the balance of normal slices may vary noticeably in size and thickness.

(iv) *Pears (slices)*. Not more than 20 percent, by count, of the units may vary noticeably from the uniform shape of slices.

(v) *Pineapple (wedges)*. Not more than a total of 15 percent, by count, of the units may vary noticeably in measurement of the outside arc of the wedges, may be less than five-sixteenths inch or more than one-half inch in thickness, and may be less than eleven-sixteenths or more than 1¼ inches in length.

(c) *(SStd) classification*. Canned fruits for salad that fail to meet the requirements of paragraph (b) of this section with respect to uniformity of size may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE V

When the following forms (styles) are present, and excluding grapes as fruit units, if present	8 oz cans or glass	No. 1 tall cans, No. 300 cans, No. 303 cans (or equivalent glass)	No. 2½ cans or glass	No. 10 cans
Halved apricots, quartered peaches, quartered pears.	No less than 2 units each of 5 fruits.	No less than 3 units each of 5 fruits.	No less than 5 units each of 5 fruits.	No less than 20 units of 3 or more fruits.
Halved apricots, sliced or quartered peaches, sliced or quartered pears.	No less than 2 units each of fruits other than those of sliced style(s).	No less than 3 units each of fruits other than those of sliced style(s).	No less than 5 units each of fruits other than those of sliced style(s).	No less than 20 units each of 2 or more fruits other than those of sliced style(s).
Quartered apricots, sliced or quartered peaches, sliced or quartered pears.	No less than 2 units each of fruits other than peaches and/or pears of sliced style and quartered style apricots.	No less than 3 units each of fruits other than peaches and/or pears of sliced style and quartered style apricots.	No less than 5 units each of fruits other than peaches and/or pears of sliced style and quartered style apricots.	No less than 20 units of 2 or more fruits other than peaches and/or pears of sliced style and quartered style apricots.

§ 52.3842 Absence of defects.

(a) *General*. The factor of defects refers to loose or attached peel from peaches or pears or when peeled apricots are present; blemishes typical for each fruit ingredient; and other defects not specifically mentioned (such as, but not limited to, harmless extraneous material, main stems or portions thereof, capstems from or on grapes, pit or core material, broken or severed units, excessive trimming) that affect the appearance or edibility of the product.

(b) *Definition of blemishes*. For the purposes of the standards in this subpart, blemishes (or blemished or blemished unit) for the respective fruit ingredient are as follows:

(1) *Apricot*—(i) *Minor blemishes*. "Minor blemishes" in unpeeled style include "freckles" and also mean:

(*a*) Light brown to brown surface areas which, singly or in combination on a unit, exceed in the aggregate the area of a circle one-eighth inch in diameter but do not exceed in the aggregate the area of a circle one-fourth inch in diameter; or

(*b*) Single dark brown surface areas that do not exceed the area of a circle one-eighth inch in diameter but which, singly or in combination with other "minor blemishes" on a unit, affect materially but not seriously the appearance of the unit. Light-brown to brown surface areas and "freckles" that are insignificant and less than the area of a circle one-eighth inch in diameter and which do not affect materially the appearance of the unit are not considered "blemished".

(ii) *Serious blemishes*. "Serious blemishes" include units affected by scab, hail injury, discoloration, or other abnormalities in the following degree:

(*a*) Light-brown to brown surface areas in unpeeled styles which, singly or in combination on a unit, exceed in the aggregate the area of a circle one-fourth inch in diameter;

(*b*) Blemishes that extend into the fruit tissue regardless of area or depth;

(*c*) Single dark brown surface areas in unpeeled styles that exceed the area of a circle one-eighth inch in diameter, whether or not the unit is affected by minor blemishes; or

(*d*) Any blemish whether or not specifically defined or mentioned in this subparagraph which affects seriously the appearance of the unit but is not a filthy or decomposed substance.

(2) *Cherries.* (i) "Blemished" or "blemished units" include, but are not necessarily limited to, cherries that are deformed, are damaged by mechanical injury, possess pits or portions thereof; are affected by surface discoloration, rough surface areas, or checks or cracks to the extent that the appearance of the cherry is materially affected.

(ii) "Seriously blemished" or "seriously blemished units" include cherries that are blemished to the extent that the appearance of the cherry is seriously affected or the edibility of the cherry is affected in any way.

(3) *Peach*—(i) *Blemished.* "Blemished" or "blemished units" means units that are blemished with scab, hail injury, discoloration, or other abnormality which affects materially the appearance or edibility of the unit.

(ii) *Seriously blemished.* "Seriously blemished" or "seriously blemished units" means units that are blemished to the extent that the appearance or edibility of the unit is seriously affected.

(4) *Pear*—(i) *Blemished.* "Blemished" or "blemished units" means units that are blemished with scab, hail injury, discoloration, or other abnormality covering an aggregate area exceeding the area of a circle one-fourth inch in diameter or units that are partially or improperly cored or stemmed. Units with black or very dark spots or any other damage which materially affect the appearance or edibility of the product are considered as "blemished", regardless of the area of the injury.

(ii) *Seriously blemished.* "Seriously blemished" or "seriously blemished units" means units that are blemished to the extent that the appearance or edibility of the unit is seriously affected.

(5) *Pineapple*—(i) *Blemished.* (*a*) "Blemishes" include:

(*1*) Any of the following, if in excess of one-sixteenth inch in the longest dimension on the exposed surface of the unit; eyes, pieces of shell, brown spots.

(*2*) Deep fruit eyes.

(*3*) Bruised portions.

(*4*) Other abnormalities that it is possible to detect in good commercial practice before sealing in the containers.

(c) (*A*) *classification.* Canned fruits for salad that are practically free from defects may be given a score of 26 to 30 points. "Practically free from defects" in canned fruits for salad means:

(1) Not more than one-fourth square inch of peel, on an average, per pound of total contents may be present;

(2) Not more than a total of 10 percent by count, of all the fruit units may be blemished and seriously blemished: *Provided,* That not more than 5 percent, by count, may be seriously blemished; and

(3) The presence of blemished and seriously blemished units, peel, and any other defects, individually or collectively does not materially affect the appearance or edibility of the product.

(d) (*B*) *classification.* If the canned fruits for salad are reasonably free from defects, a score of 21 to 25 points may be given. Canned fruits for salad that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" in canned fruits for salad means:

(1) Not more than one-half square inch of peel, on an average, per pound of total contents may be present;

(2) Not more than a total of 20 percent, by count, of all the fruit units may be blemished: *Provided,* That not more than 10 percent, by count, may be seriously blemished; and

(3) The presence of blemished and seriously blemished units, peel, and any other defects, individually or collectively does not seriously affect the appearance or edibility of the product.

(e) (*SStd*) *classification.* Canned fruits for salad that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3843 Character.

(a) *General.* The factor of character, as may be applicable to the respective fruit ingredient, refers to the degree of ripeness, the texture and condition of the flesh, the firmness, the tenderness, and the tendency of the units to retain their apparent original conformation and size without material disintegration.

(b) (*A*) *classification.* Canned fruits for salad that possess a good character may be given a score of 25 to 30 points. "Good character" means that not more than 10 percent, by count, of the total number of apricot, peach, pear, and pineapple ingredients may fail to comply with the following requirements for the individual fruit ingredient, and that the cherries, or grapes if present, are reasonably firm and retain their apparent original conformation.

(1) *Apricot.* The units possess a reasonably uniform, reasonably tender texture typical of properly ripened canned apricots that are properly processed; the texture is reasonably fleshy, and the units are reasonably thick but the tenderness may be variable within the unit or among the units; and the units may be soft to slightly firm or slightly ragged but are not mushy.

(2) *Peach.* The units possess a texture typical of mature, properly ripened, properly prepared, and properly processed canned clingstone peaches; the texture is reasonably fleshy, and the units are reasonably tender or the tenderness may be variable within the unit; and the units are reasonably intact with not more than slightly frayed edges and may be slightly firm or slightly soft but are not mushy.

(3) *Pear.* The units possess a texture typical of properly ripened pears that are properly processed; the units may possess a texture of moderate graininess; the units are reasonably tender or the tenderness may be variable within the unit; and the units may be slightly firm or slightly ragged with slightly frayed edges or slightly soft but are not mushy.

(4) *Pineapple.* The units are of practically uniform ripeness, the fruitlets appear as a compact structure, and the units are reasonably free from porosity.

(c) (*B*) *classification.* If the canned fruits for salad possess a reasonably good character, a score of 21 to 24 points may be given. Canned fruits for salad that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that not more than 10 percent, by count, of the total number of apricot, peach, pear, and pineapple ingredients may fail to comply with the following requirements for the individual fruit ingredient, and that the cherries, or grapes if present, may be only fairly firm: *Provided,* That the appearance or edibility of the product is not affected materially by such units:

(1) *Apricot.* The units possess a texture of properly processed apricots which may be variable but the texture is fairly fleshy and the units are intact; the units may be lacking uniformity of tenderness but are not so firm as to be "not tender"; and the units may be markedly ragged with frayed edges or may be very soft but are not mushy.

(2) *Peach.* The units possess a texture typical of mature, properly prepared, and properly processed canned clingstone peaches which may be variable but the texture is fairly fleshy; the units may be lacking uniformity of tenderness, but are not so firm as to be "not tender"; and the units may be frayed but not excessively frayed or may be soft but are not mushy.

(3) *Pear.* The units possess a texture of properly processed pears which may be variable; the units may possess a texture of marked graininess; and the units may be lacking uniformity of

tenderness and may be markedly firm but are not so firm as to be "not tender";

(4) *Pineapple.* The units are of reasonably uniform ripeness, the fruitlets are reasonably compact in structure, and the units are fairly free from porosity.

(d) (*SStd*) *classification.* Canned fruits for salad that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.3844 Ascertaining the grade of a lot.

The grade of a lot of canned fruits for salad covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3845 Score sheet.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Brix measurement ....
Sirup designation (extra heavy, heavy, etc.) ....

Proportions of fruit ingredients:

Fruit	Average		Count ranges	Styles
	Ounces	Percent		
Apricot			to	
Peach			to	
Pear			to	
Pineapple			to	
Cherry			to	
Grape			to	
Total		100		

Factors			Score points
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd)	[1] 0-13
Uniformity of count and size	20	(A)	[1] 17-20
		(B)	[1] 14-16
		(SStd)	[1] 0-13
Absence of defects	30	(A)	26-30
		(B)	[1] 21-25
		(SStd)	[1] 0-20
Character	30	(A)	25-30
		(B)	[1] 21-24
		(SStd)	[1] 0-20
Total score	100		

Flavor and odor ( ) normal; ( ) off ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Dehydrated, Low-Moisture Apricots

SOURCE: 24 FR 8732, Oct. 29, 1959, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, MOISTURE, STYLES, AND GRADES

§ 52.3871 Product description.

Dehydrated low-moisture apricots, hereinafter referred to as "low-moisture apricots" are prepared from clean and sound fresh or previously dried apricots which are cut, chopped, or otherwise prepared into various sizes and shapes; are prepared to assure a clean, sound, wholesome product; are processed by dehydration whereby practically all of the moisture is removed to produce a very dry texture; and are packaged (including kind of container and proper closure) to assure retention of the low-moisture characteristics of the product. The product shall have been subjected to sulfur treatment sufficiently to retain a characteristic color but no other additives may be present.

§ 52.3872 Moisture of low-moisture apricots.

The moisture content of all styles of the finished product shall not be more than 7.5 percent.

[39 FR 18089, May 23, 1974. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3873 Styles of low-moisture apricots.

(a) *Nugget-type.* "Nugget-type" is especially processed to produce popcorn-like or foam-textured units of irregular-shapes of such size that practically all of the units will pass through 0.625 inch (⅝-inch) square openings.

(b) *Pieces.* "Pieces" consist of irregularly-shaped cut or chopped pieces of such size that practically all of the units will pass through 0.625 inch (⅝-inch) square openings.

(c) *Diced.* "Diced" consists of predominantly partial cube-shaped units with a square dimension on one surface of such units.

(d) *Slices.* "Slices" consist of predominantly parallel-cut strips of irregular shapes and thicknesses.

§ 52.3874 Grades of low-moisture apricots.

(a) "U.S. Grade A" (or "U.S. Fancy") low-moisture apricots is the quality of low-moisture apricots that possess a normal flavor and odor, that possess a good color, that are reasonably uniform in size, that are practically free from defects, that possess a good texture; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points: *Provided,* That the low-moisture apricots may be fairly uniform in size and may possess a reasonably good texture, if the total score is not less than 85 points.

(b) "U.S. Grade B" (or "U.S. Choice") low-moisture apricots is the quality of low-moisture apricots that possess a normal flavor and odor, that possess a reasonably good color, that are fairly uniform in size, that are reasonably free from defects, that possess a reasonably good texture; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided,* That the low-moisture apricots may vary in uniformity of size, if the total score is not less than 70 points.

(c) "Substandard" low-moisture apricots is the quality of low-moisture apricots that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.3875 Ascertaining the grade.

In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(a) *Factors not rated by score points.*

(1) Flavor and odor.

(b) *Factors rated by score points.* (1) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
(i) Color	20
(ii) Uniformity of size	20
(iii) Absence of defects	40
(iv) Texture	20
Total score	100

(2) The factors of flavor and odor, color, certain defects as may be applicable, and texture are ascertained upon the low-moisture apricots and the cooked product as specified in this subpart.

(c) *Flavor and odor.* "Normal flavor and odor" means that the low-moisture apricots and the cooked product possess a characteristic flavor and odor that is free from objectionable flavors or objectionable odors of any kind. A flavor and odor in the low-moisture apricots indicative of proper sulfur treatment is not considered objectionable unless after cooking the flavor is objectionable from such detectable cause.

§ 52.3876 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.3877 Color.

(a) (*A*) *classification.* Low-moisture apricots that possess a good color may be given a score of 17 to 20 points. "Good color" means that the over-all color is characteristic for the product and respective style ranging from bright reddish-orange to bright orange-amber among the units and within individual units and is reasonably uniform; and that such characteristic color, upon cooking, is a reasonably bright color typical of cooked low-moisture apricots that have been properly prepared and processed.

(b) (*B*) *classification.* If the low-moisture apricots possess a reasonably good color, a score of 14 to 16 points may be given. Low-moisture apricots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the overall color may vary considerably ranging from slightly dull orange to dull amber; and that such characteristic color, upon cooking, may be slightly dull but is typical of cooked low-moisture apricots that have been properly prepared and processed.

(c) (*SStd*) *classification.* Low-moisture apricots that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3878 Uniformity of size.

(a) (*A*) *classification.* Low-moisture apricots that are reasonably uniform in size may be given a score of 17 to 20 points. "Reasonably uniform in size" has the following meanings for the respective styles:

(1) *Nugget-type; pieces.* Practically all of the units are of such size and shape as to pass through 0.625 (⅝-inch) square openings and not more than 10 percent, by weight, of the low-moisture apricots may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch ±3 percent, square openings).

(2) *Diced.* Practically all of the units, except for fine pieces, are definite partial cube-shapes and not less than 60 percent, by weight, of the low-moisture apricots approximate cube-shapes of ¼ inch to ½ inch square on one surface dimension; and not more than 5 percent by weight, of the low-moisture apricots may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(3) *Slices.* Practically all of the units except for small pieces, are definite parallel-cut strips and not less than 70 percent, by weight, of the dehydrated apricots approximate ¼ inch to ½ inch in width and approximate ¾ inch or more in length; and not more than 5 percent, by weight, of the low-moisture apricots may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch ±3 percent, square openings):

(b) (*B*) *classification.* If the low-moisture apricots are fairly uniform in size, a score of 14 to 16 points may be given. "Fairly uniform in size" has the following meanings for the respective styles:

(1) *Nugget-type; pieces.* Practically all of the units are of such size and shape as to pass through 0.625 (⅝-inch) square openings and not more than 25 percent, by weight, of the low-moisture apricots may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(2) *Diced.* Practically all of the units, except for fine pieces, are definite partial cube-shapes and not less than 40 percent, by weight, of the dehydrated apricots approximate cube-shapes of ¼ inch to ½ inch square on one surface dimension; and not more than 10 percent, by weight, of the low-moisture apricots may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(3) *Slices.* Practically all of the units, except for small pieces, are definite parallel-cut strips of varying lengths; and not less than 50 percent, by weight, of the low-moisture apricots approximate ¼ inch to ½ inch in width; and not more than 10 percent, by weight, of the low-moisture apricots may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(c) (*SStd*) *classification.* Low-moisture apricots that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above

U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3879 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from damaged and seriously damaged units and from other defects or injury that affect the appearance or eating quality of the units or product.

(b) *Definitions.* (1) "Damaged units" are units that possess defects which materially affect the appearance of the low-moisture apricots and are of such nature that they may or may not disappear upon cooking and include, but are not limited to:

(i) Units that are definitely mechanically damaged other than from preparation by cutting or chopping; and

(ii) Units that possess scars, blemishes, insect injury or other abnormality.

(2) "Seriously damaged units" include units that are seriously darkened (very dark brown to black) or which in any other way seriously affect the appearance of the low-moisture apricots and that the damage is of such nature that it does not disappear upon cooking.

(c) (*A*) *classification.* Low-moisture apricots that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the low-moisture apricots are practically free from any defects that affect more than slightly the appearance or eating quality either in the low-moisture apricots or after cooking; and that not more than a total of 5 percent, by weight, of the low-moisture apricots may be damaged units: *Provided,* That not more than 2 percent, by weight, of the low-moisture apricots may be seriously damaged units.

(d) (*B*) *classification.* If the low-moisture apricots are reasonably free from defects, a score of 28 to 33 points may be given. Low-moisture apricots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the low-moisture apricots are reasonably free from any defects that affect materially the appearance or eating quality either in the low-moisture apricots or after cooking; and that not more than a total of 10 percent, by weight, of the low-moisture apricots may be damaged units; *Provided,* That not more than 4 percent, by weight, of the low-moisture apricots may be seriously damaged units.

(e) (*SStd*) *classification.* Low-moisture apricots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3880 Texture.

(a) (*A*) *classification.* Low-moisture apricots that possess a good texture may be given a score of 17 to 20 points. "Good texture" means with respect to the low-moisture apricots that the units may vary in texture from partially pliable to brittle but are otherwise reasonably uniform in texture; and, after cooking in accordance with the method outlined in this subpart, meet the following requirements for the applicable style:

(1) *Nugget-type.* The cooked mass has a reasonably uniform texture and finish that is coarse or grainy without practically any hard particles.

(2) *Pieces.* The cooked product is practically free from hard, firm, or tough units and there is no more than moderate disintegration except for fine pieces that may have been present.

(3) *Diced.* The cooked product is practically free from hard or tough units and substantially retains the semblance of diced apricots except for small pieces or odd-shaped pieces that may have been present.

(4) *Slices.* The cooked product is practically free from hard or tough units and substantially retains the semblance of strips of apricots except for small pieces or odd-shaped pieces that may have been present.

(b) (*B*) *classification.* If the low-moisture apricots possess a reasonably good texture, a score of 14 to 16 points may be given. "Reasonably good texture" means with respect to the low-moisture apricots that the units may vary in texture from partially pliable to brittle and may lack uniformity of texture; and, after cooking in accordance with the method outlined in this subpart, meet the following requirements for the applicable style:

(1) *Nugget-type.* The cooked mass has a fairly uniform texture and finish that may range from fine and grainy to coarse and grainy; and hard particles may be noticeable but not objectionable.

(2) *Pieces.* The cooked product is fairly free from hard, firm, or tough units and may disintegrate generally into a coarse, saucelike consistency.

(3) *Diced.* The cooked product is fairly free from hard or tough units and consists of substantial amounts of diced apricot pieces intermingled with a slight amount of mushiness from small pieces which may have been present.

(4) *Slices.* The cooked product is fairly free from hard or tough units and consists of substantial amounts of strips of apricots intermingled with a slight amount of mushiness from small pieces which may have been present.

(c) *(SStd) classification.* Low-moisture apricots that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATION AND METHODS OF ANALYSES

§ 52.3881 Explanations of methods and analyses.

(a) *Moisture method.* "Moisture" in low-moisture apricots is determined in accordance with the official method applicable to dried fruits as outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists" or in accordance with methods which produce equivalent results.

(b) *Cooking procedure*—(1) *General.* The cooking procedures that follow are not intended to be a recipe for purposes of food preparation but are for the purposes of ascertaining compliance with requirements for applicable quality factors as outlined in this subpart.

(2) *Method.* Add 50 grams of low-moisture apricots to 400 ml. of water, bring to a boil, and simmer with only gentle and occasional stirring for the time specified for the respective styles:

(i) *Nugget-type; pieces.* Simmer for 15 minutes.

(ii) *Diced; sliced.* Simmer for 25 minutes.

(c) *Screening method.* The technique for ascertaining compliance with the requirements in all styles for particles that pass through a U.S. Standard No. 8 sieve is as follows:

(1) *Nugget-type; pieces; diced; slices.* (i) Place a 100-gram representative sample of the low-moisture apricots on a U.S. Standard No. 8, 8-inch diameter, full-height sieve to which a bottom pan has been attached;

(ii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches in a straight line and return to its original position, repeating the movement 20 times;

(iii) Weigh the fine material sifted through to the bottom pan and, on the basis of the original sample, calculate the percentage which passed through the No. 8 sieve.

LOT INSPECTION AND CERTIFICATION

§ 52.3882 Ascertaining the grade of a lot.

The grade of a lot of low-moisture apricots covered by these standards is determined by procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3883 Score sheet for low-moisture apricots.

Size and kind of container
Container mark or identification
Label (including statement of sulfur content)
Net weight
Moisture content (percent)
Style

Factors		Score points	
Color	20	(A)	17-20
		(B)	[2]14-16
		(SStd)	[1]0-13
Uniformity of size.	20	(A)	17-20
		(B)	14-16
		(SStd)	[1]0-13
Absence of defects.	40	(A)	34-40
		(B)	[2]28-33
		(SStd)	[1]0-27
Texture	20	(A)	17-20
		(B)	14-16
		(SStd)	[1]0-13
Total score	100		

Flavor and odor ( ) Normal ( ) Off ....

Grade ....

[1] Indicates limiting rule.

[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Dehydrated, Low-Moisture Peaches

SOURCE: 24 FR 8779, Oct. 29, 1959, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, MOISTURE, STYLES, AND GRADES

§ 52.3911 Product description.

Dehydrated, low-moisture peaches, hereinafter referred to as "low-moisture peaches", are prepared from clean and sound fresh or previously dried peaches which are cut, chopped, or otherwise prepared into various sizes and shapes; are prepared to assure a clean, sound, wholesome product; are processed by dehydration whereby practically all of the moisture is removed to produce a very dry texture; and are packaged (including kind of container and proper closure) to assure retention of the low-moisture characteristics of the product. The product shall have been subjected to sulfur treatment sufficiently to retain a characteristic color but no other additives may be present.

§ 52.3912 Moisture of low-moisture peaches.

The moisture content of all styles of the finished product shall not be more than 7.5 percent.

[39 FR 18089, May 23, 1974. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.3913 Styles of low-moisture peaches.

(a) *Nugget-type.* "Nugget-type" is especially processed to produce popcorn-like or foam-textured units of irregularshapes of such size that practically all of the units will pass through 0.625 inch (⅝ inch) square openings.

(b) *Pieces.* "Pieces" consist of irregularly-shaped cut or chopped pieces of such size that practically all of the units will pass through 0.625 inch (⅝ inch) square openings.

(c) *Diced.* "Diced" consists of predominantly partial cube-shaped units with a square dimension on one surface of such units.

(d) *Slices.* "Slices" consist of predominantly parallel-cut strips of irregular shapes and thicknesses.

§ 52.3914 Grades of low-moisture peaches.

(a) "U.S. Grade A" (or "U.S. Fancy") low-moisture peaches is the quality of low-moisture peaches that possess a normal flavor and odor, that possess a good color, that are reasonably uniform in size, that are practically free from defects, that possess a good texture; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 85 points: *Provided,* That the low-moisture peaches may be fairly uniform in size and may possess a reasonably good texture if the total score is not less than 85 points.

(b) "U.S. Grade B" (or "U.S. Choice") low-moisture peaches is the quality of low-moisture peaches that possess a normal flavor and odor, that possess a reasonably good color, that are fairly uniform in size, that are reasonably free from defects, that possess a reasonably good texture; and that for those factors which are scored in accordance with the scoring system outlined in this subpart the total score is not less than 70 points: *Provided,* That the low-moisture peaches may vary in uniformity of size, if the total score is not less than 70 points.

(c) "Substandard" low-moisture peaches is the quality of low-moisture peaches that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.3915 Ascertaining the grade.

In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(a) *Factors not rated by score points.* (1) Flavor and odor.

(b) *Factors rated by score points.* (1) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
(i) Color	20
(ii) Uniformity of size	20
(iii) Absence of defects	40
(iv) Texture	20
Total score	100

(2) The factors of flavor and odor, color, certain defects as may be applicable, and texture are ascertained upon the low-moisture peaches and the cooked product as specified in this subpart.

(c) *Flavor and odor.* "Normal flavor and odor" means that the low-moisture peaches and the cooked product possess a characteristic flavor and odor that is free from objectionable flavors or objectionable odors of any kind. A flavor and odor in the low-moisture peaches indicative of proper sulfur treatment is not considered objectionable unless after cooking the flavor is objectionable from such detectable cause.

§ 52.3916 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means 17, 18, 19, or 20 points).

§ 52.3917 Color.

(a) (*A*) *classification.* Low-moisture peaches that possess a good color may be given a score of 17 to 20 points. "Good color" means that the over-all color is characteristic for the product and respective style ranging from deep rich yellow or yellow-orange to deeper orange-amber among the units and within individual units and is reasonably uniform; and that such characteristic color, upon cooking, is a reasonably bright color typical of cooked low-moisture peaches that have been properly prepared and processed.

(b) (*B*) *classification.* If the low-moisture peaches possess a reasonably good color, a score of 14 to 16 points may be given. Low-moisture peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that the over-all color may vary considerably ranging from slightly dull yellow or slightly dull yellow-orange to darker orange and dark amber; and that such characteristic color, upon cooking, may be slightly dull but is typical of cooked low-moisture peaches that have been properly prepared and processed.

(c) (*SStd*) *classification.* Low-moisture peaches that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3918 Uniformity of size.

(a) (*A*) *classification.* Low-moisture peaches that are reasonably uniform in size may be given a score of 17 to 20 points. "Reasonably uniform in size" has the following meanings for the respective styles.

(1) *Nugget-type: pieces.* Practically all of the units are of such size and shape as to pass through 0.625 (⅝ inch) square openings and not more than 10 percent, by weight, of the low-moisture peaches may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(2) *Diced.* Practically all of the units, except for fine pieces, are definite partial cube-shapes and not less than 40 percent, by weight, of the low-moisture peaches approximate cube-shapes of ¼ inch to ½ inch square on one surface dimension; and not more than 5 percent by weight, of the low-moisture peaches may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(3) *Slices.* Practically all of the units except for small pieces, are definite parallel-cut strips and not less than 70 percent, by weight, of the low-moisture peaches approximate ¼ inch to ½ inch in width and approximate ¾ inch or more in length; and not more than 5 percent, by weight, of the low-moisture peaches may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(b) (*B*) *classification.* If the low-moisture peaches are fairly uniform in size, a score of 14 to 16 points may be given. "Fairly uniform in size" has the following meanings for the respective styles:

(1) *Nugget-type; pieces.* Practically all of the units are of such size and shape as to pass through 0.625 (⅝-inch) square openings, and not more than 25 percent, by weight, of the low-moisture peaches may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(2) *Diced.* Practically all of the units, except for fine pieces, are definite partial cube-shapes and not less than 40 percent, by weight, of the dehydrated peaches approximate cube-shapes of ¼ inch to ½ inch square on one surface dimension; and not more than 10 percent, by weight, of the low-moisture peaches may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(3) *Slices.* Practically all of the units, except for small pieces, are definite parallel-cut strips of varying lengths; and not less than 50 percent, by weight, of the low-moisture peaches approximate ¼ inch to ½ inch in width; and not more than 10 percent, by weight, of the low-moisture peaches may pass through meshes of a U.S. Standard No. 8 sieve (0.0937-inch, ±3 percent, square openings).

(c) (*SStd*) *classification.* Low-moisture peaches that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).

§ 52.3919 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from damaged and seriously damaged units and from other defects or injury that affect the appearance or eating quality of the units or product.

(b) *Definitions.* (1) "Damaged units" are units that possess defects which materially affect the appearance of the low-moisture peaches and are of such nature that they may or may not disappear upon cooking and include, but are not limited to:

(i) Units that are definitely mechanically damaged other than from preparation by cutting or chopping; and

(ii) Units that possess scars, blemishes, insect injury, or other abnormality.

(2) "Seriously damaged units" include units that are seriously darkened (very dark brown to black) or which in any other way seriously affect the appearance of the low-moisture peaches and that the damage is of such nature that it does not disappear upon cooking.

(c) (*A*) *classification.* Low-moisture peaches that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the low-moisture peaches are practically free from any defects that affect more than slightly the appearance or eating quality either in the low-moisture peaches or after cooking; and that not more than a total of 5 percent, by weight, of the low-moisture peaches may be damaged units: *Provided,* That not more than 2 percent, by weight, of the low-moisture peaches may be seriously damaged units.

(d) (*B*) *classification.* If the low-moisture peaches are reasonably free from defects, a score of 28 to 33 points may be given. Low-moisture peaches that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the low-moisture peaches are reasonably free from any defects that affect materially the appearance or eating quality either in the low-moisture peaches or after cooking; and that not more than a total of 10 percent, by weight, of the low-moisture peaches may be damaged units: *Provided*, That not more than 4 percent, by weight, of the low-moisture peaches may be seriously damaged units.

(e) (*SStd*) *classification*. Low-moisture peaches that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.3920 Texture.

(a) (*A*) *classification*. Low-moisture peaches that possess a good texture may be given a score of 17 to 20 points. "Good texture" means with respect to the low-moisture peaches that the units may vary in texture from partially pliable to brittle but are otherwise reasonably uniform in texture; and, after cooking in accordance with the method outlined in this subpart, meet the following requirements for the applicable style:

(1) *Nugget-type*. The cooked mass has a reasonably uniform texture and finish that is coarse or grainy without practically and hard particles.

(2) *Pieces*. The cooked product is practically free from hard, firm, or tough units and there is no more than moderate disintegration except for fine pieces that may have been present.

(3) *Diced*. The cooked product is practically free from hard or tough units and substantially retain the semblance of diced peaches except for small pieces or odd-shaped pieces that may have been present.

(4) *Slices*. The cooked product is practically free from hard or tough units and substantially retains the semblance of strips of peaches except for small pieces or odd-shaped pieces that may have been present.

(b) (*B*) *classification*. If the low-moisture peaches possess a reasonably good texture, a score of 14 to 16 points may be given. "Reasonably good texture" means with respect to the low-moisture peaches that the units may vary in texture from partially pliable to brittle and may lack uniformity of texture; and, after cooking in accordance with the method outlined in this subpart, meet the following requirements for the applicable style:

(1) *Nugget-type*. The cooked mass has a fairly uniform texture and finish that may range from fine and grainy to coarse and grainy; and hard particles may be noticeable but not objectionable.

(2) *Pieces*. The cooked product is fairly free from hard, firm, or tough units and may disintegrate generally into a coarse, saucelike consistency.

(3) *Diced*. The cooked product is fairly free from hard or tough units and consists of substantial amounts of diced peach pieces intermingled with a slight amount of mushiness from small pieces which may have been present.

(4) *Slices*. The cooked product is fairly free from hard or tough units and consists of substantial amounts of strips of peaches intermingled with a slight amount of mushiness from small pieces which may have been present.

(c) (*SStd*) *classification*. Low-moisture peaches that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.3921 Explanations of methods and analyses.

(a) *Moisture method*. "Moisture" in low-moisture peaches is determined in accordance with the official method applicable to dried fruits as outlined in the "Official Methods of Analysis of the Association of Official Agricultural Chemists" or in accordance with methods which produce equivalent results.

(b) *Cooking procedure*—(1) *General.* The cooking procedures that follow are not intended to be a recipe for purposes of food preparation but are for the purposes of ascertaining compliance with requirements for applicable quality factors as outlined in this subpart.

(2) *Method.* Add 50 grams of low-moisture peaches to 400 ml. of water bring to a boil, and simmer with only gentle and occasional stirring for the time specified for the respective styles:

(i) *Nugget-type; pieces.* Simmer for 15 minutes.

(ii) *Diced; sliced.* Simmer for 25 minutes.

(c) *Screening method.* The technique for ascertaining compliance with the requirements in all styles for particles that pass through a U.S. Standard No. 8 sieve is as follows:

(1) *Nugget-type; pieces; diced; slices.* (i) Place a 100 gram representative sample of the low-moisture peaches on a U.S. Standard No. 8, 8-inch diameter full-height sieve to which a bottom part has been attached;

(ii) Place the assembly on a smooth level surface and with a steady, fairly rapid sieving motion, move the assembly approximately 20 inches in a straight line and return to its original position, repeating the movement 20 times;

(iii) Weigh the fine material sifted through to the bottom pan and, on the basis of the original sample, calculate the percentage which passed through the No. 8 sieve.

LOT INSPECTION AND CERTIFICATION

§ 52.3922 Ascertaining the grade of a lot.

The grade of a lot of low-moisture peaches covered by these standards is determined by procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.3923 Score sheet for low-moisture peaches.

Size and kind of container ....
Container mark or identification..........
Label (including statement of sulfur content)..........
Net Weight..........
Moisture content (percent)..........
Style..........

Factors		Score points	
Color	20	(A)	17-20
		(B)	[1] 14-16
		(SStd)	[1] 0-13
Uniformity of size.	20	(A)	17-20
		(B)	14-16
		(SStd)	[2] 0-13
Absence of defects.	40	(A)	34-40
		(B)	[1] 28-33
		(SStd)	[1] 0-27
Texture	20	(A)	17-20
		(B)	14-16
		(SStd)	[1] 0-13
Total score	100		

Flavor and odor ( ) Normal ( ) Off ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Concentrated Lemon Juice for Manufacturing

SOURCE: 24 FR 5278, June 30, 1959, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.3951 Product description.

Concentrated lemon juice for manufacturing is the concentrated product obtained from sound, mature lemons. The fruit is prepared by sorting and by washing prior to extraction of the juice. The concentrated lemon juice is prepared and concentrated in accordance with good commercial practice. It may or may not require processing by heat, subsequent refrigeration, or freezing to assure preservation of the product. The finished product may contain added pulp, lemon oil to standardize flavor, and/or chemical preservatives permissible under provisions of the Federal Food, Drug, and Cosmetic Act.

§ 52.3952 Grades of concentrated lemon juice for manufacturing.

(a) "U.S. Grade A for Manufacturing" (or "U.S. Fancy for Manufacturing") is the quality of concentrated lemon juice which shows no material gelation and reconstitutes properly, of which the reconstituted juice possesses a reasonably good color and is practically free from defects; when prepared for flavor evaluation, possesses a reasonably good flavor, and scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C for Manufacturing" (or "U.S. Standard for Manufacturing") is the quality of concentrated lemon juice which shows no serious gelation and reconstitutes properly; of which the reconstituted juice possesses a fairly good color and is fairly free from defects when prepared for flavor evaluation, possesses a fairly good flavor; and scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard for Manufacturing" is the quality of concentrated lemon juice that fails to meet the requirements of U.S. Grade C for Manufacturing.

FILL OF CONTAINER

§ 52.3953 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be filled with concentrated lemon juice as full as practicable without impairment of quality.

PULP REQUIREMENTS

§ 52.3954 Pulp.

(a) Pulp is not considered a factor of quality for the purpose of these standards. It is recommended that purchase contracts specify the type and amount of pulp desired in the product. The amount of pulp in the concentrate may be determined by the methods outlined in this subpart.

CONCENTRATION

§ 52.3955 Degree of concentration.

The degree of concentration of the lemon juice is not considered a factor of quality for the purpose of these standards. It is recommended that the degree of concentration be indicated by the number of grams of anhydrous citric acid contained in each liter of the concentrate.

FACTORS OF QUALITY

§ 52.3956 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of concentrated lemon juice for manufacturing is ascertained by examining the concentrate, the reconstituted juice, and a sweetened product prepared therefrom; and in addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Degree of gelation;

(ii) Faculty of reconstituting properly.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	40
Defects	20
Flavor	40
Total score	100

§ 52.3957 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "17 to 20 points" means 17, 18, 19, or 20 points.)

§ 52.3958 Color.

(a) Color of the product is evaluated by observing the reconstituted juice in a glass test tube one inch in diameter by six inches deep; observation to be made through the side of the tube.

(b) (*A-Mfg.*) *classification.* Concentrated lemon juice of which the reconstituted juice possesses a reasonably good color may be given a score of 34 to 40 points. "Reasonably good color" means that the color is reasonably bright and typical of properly processed lemon juice and is practically free from browning caused by scorching, oxidation, storage conditions, or other causes.

(c) (*C-Mfg.*) *classification.* If the reconstituted juice possesses a fairly good color a score of 28 to 33 points may be given. Concentrated lemon juice that falls into this classification shall not be graded above U.S. Grade C for Manufacturing, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a color that may be only fairly bright and is typical of reconstituted lemon juice that is reasonably free from browning due to scorching, oxidation, improper storage, or other causes.

(d) (*SStd-Mfg.*) *classification.* Concentrated lemon juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard for Manufacturing, regardless of the total score for the product (this is a limiting rule).

§ 52.3959 Defects.

(a) The factor of defects refers to the degree of freedom from particles of seed, dark specks, particles of peel and other defects which affect the utility of the product.

(b) (*A-Mfg.*) *classification.* Concentrated lemon juice of which the reconstituted juice is practically free from defects may be given a score of 17 to 20 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or utility of the product.

(c) (*C-Mfg.*) *classification.* If the reconstituted juice is fairly free from defects a score of 14 to 16 points may be given. Concentrated lemon juice that falls into this classification shall not be graded above U.S. Grade C for Manufacturing, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present do not seriously affect the appearance or utility of the product.

(d) (*SStd-Mfg.*) *classification.* Concentrated lemon juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard for Manufacturing, regardless of the total score for the product (this is a limiting rule).

§ 52.3960 Flavor.

(a) The flavor of the product is evaluated after preparing as follows:

Concentrated lemon juice diluted to 5.7 grams acid/100 ml	30 ml.
Sugar	26 gm.
Water	160 ml.

(b) (*A-Mfg.*) *classification.* Concentrated lemon juice of which the prepared product possesses a reasonably good flavor may be given a score of 34 to 40 points. "Reasonably good flavor" means that the flavor is typical of such a product prepared from properly processed concentrated lemon juice and is free from terpenic, oxidized, rancid or other similar flavors and is free from abnormal flavors of any kind.

(c) (*C-Mfg.*) *classification.* If the prepared product possess a fairly good flavor a score of 28 to 33 points may be given. Concentrated lemon juice that falls into this classification shall not be graded above U.S. Grade C for Manufacturing, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means a normal lemon flavor which is fairly free from terpenic, oxidized or other similar flavors and is free from abnormal flavors of any kind.

(d) (*SStd-Mfg.*) *classification.* Concentrated lemon juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard for Manufacturing, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.3961 Definitions of terms.

(a) *Reconstituted juice.* "Reconstituted juice" means the product obtained by thoroughly mixing the concentrated lemon juice with a volume of distilled water so that the concentration is reduced to approximately 5.7 grams acid per 100 ml.

(b) *Acid.* "Acid" means the number of grams of total acidity, calculated as anhydrous citric in a specified volume of concentrated lemon juice or reconstituted juice. Total acidity is determined by titration with standard sodium hydroxide solution, using phenolphthalein as indicator.

(c) *Reconstitutes properly.* "Reconstitutes properly" means that the concentrate dissolves readily in water.

(d) *Pulp.* "Pulp" means light membranous materials and fine centrifuged pulp and other similar lemon fruit material, defined and ascertained as follows:

(1) *Light membranous materials.* "Light membranous materials" means pulp including juice sacs but exclusive of peel particles, that is recoverable by the following method:

(i) *Equipment.* United States Standard No. 20 Circular Sieve 8-inches in diameter containing 20 meshes to the inch (0.0331 inch ±5 percent) square openings; graduated cylinder or centrifuge tube; spatula.

(ii) *Procedure.* (*a*) Pour one liter of the product through the sieve with the aid of gentle stream of tap water;

(*b*) Rinse the retained pulp with a gentle stream of tap water only until all of the product is removed from the pulp;

(*c*) Dry and gather the pulp into a ball by shaking the sieve back and forth;

(*d*) As soon as the pulp has been gathered into a ball, place it into a suitable dry graduated cylinder or centrifuge tube and settle by tapping lightly in the palm of one's hand. If air pockets remain a thin spatula may be used to effect their removal;

(*e*) The number of milliliters of pulp divided by ten is the percent by volume of "light membranous materials";

(*f*) If the light membranous material so recovered exceeds 100 milliliters or will not dry and gather into a small ball, discard results and repeat the test using a sample so reduced in size as to yield less than 100 milliliters of such material which will so dry and gather. Calculate the percent of light membranous materials as follows:

Percent of light membranous materials by volume=(Ml. recovered material×100)/(Ml. of sample)

(2) *Fine centrifuged pulp.* "Fine centrifuged pulp" means pulp that settles out on centrifuging by the following method:

(i) Remove the light membranous material from the sample of reconstituted juice by pouring it through a No 20 sieve, and

(ii) Fill graduated centrifuge tubes, of a capacity of 50 ml., with the sieved reconstituted lemon juice and place in a suitable centrifuge. Adjust the speed as nearly as possible according to diameter as indicated in Table I and centrifuge for exactly 10 minutes. As used herein, "diameter" means the overall distance between the bottoms of opposing centrifuge tubes in operating position. After centrifuging, the milliliter reading at the top of the layer of pulp in the tube is multipled by two to give the percentage of pulp.

TABLE I [1]

Diameter (inches)	Revolutions per minute
10	1,609
10½	1,570
11	1,534
11½	1,500
12	1,468
12½	1,438
13	1,410
13½	1,384
14	1,359
14½	1,336
15	1,313
15½	1,292
16	1,271
16½	1,252
17	1,234
17½	1,216
18	1,199
18½	1,182
19	1,167
19½	1,152
20	1,137

[1] This table, calculated from the formula R.C.F. = 0.00001118 N^2r, provides a Relative Centrifugal Force of 364.6 times gravity.

LOT INSPECTION AND CERTIFICATION

§ 52.3962 Ascertaining the grade of a lot.

The grade of a lot of concentrated lemon juice for manufacturing covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.3963 Score sheet for concentrated lemon juice for manufacturing.

Size and kind of container ....

Container mark or identification ....

Label (including concentration) ....

Liquid measure (fluid ounces) ....

Net weight ....

Anhydrous citric acid in concentrate (grams/liter) ....

Reconstitutes properly: (Yes) (No) ....

Factors		Score points	
Color	40	(A-Mfg.)	34-40
		(C-Mfg.)	[1] 28-33
		(SStd-Mfg.)	[1] 0-27
Defects	20	(A-Mfg.)	17-20
		(C-Mfg.)	[1] 14-16
		(SStd-Mfg.)	[1] 0-13
Flavor	40	(A-Mfg.)	34-40
		(C-Mfg.)	[1] 28-33
		(SStd-Mfg.)	[1] 0-27
Total score	100		

Percent of light membranous materials ....

Percent of fine centrifuged pulp ....

Grade for manufacturing ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Grapes

SOURCE: 38 FR 13363, May 21, 1973, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.4021 Product description.

(a) "Canned grapes" is the product represented as defined in the Standards of Identity for canned grapes (21 CFR 145.140) issued pursuant to the Federal Food, Drug, and Cosmetic Act. For the purpose of these standards canned grapes are prepared from the light seedless varietal type and are stemmed.

[41 FR 15020, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.4022 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned grapes that possess similar varietal characteristics; that possess a normal flavor; that possess a good color; that are practically uniform in size; that are practically free from defects; that possess a good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 85 points: *Provided,* That the canned grapes may possess a reasonably uniform and reasonably bright typical color and may be reasonably uniform in size, if the total score is not less than 85 points.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of canned grapes that possess similar varietal characteristics; that possess a normal flavor; that possess a reasonably good color; that are reasonably uniform in size; that are reasonably free from defects; that possess a reasonably good character; and that for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 70 points: *Provided,* That the canned grapes may fail to be reasonably uniform in size, if the total score is not less than 70 points.

(c) "Substandard" is the quality of canned grapes that fail to meet the requirements of U.S. Grade B.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, AND FILL WEIGHTS

§ 52.4023 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned grapes are not incorporated in the grades of the finished product since sirup or any other liquid medium, as such, is not a factor of quality for the purposes of these grades. The "cut-out" Brix measurements, as applicable, for the respective designations are as follows:

Designations	Brix measurements
"Extra heavy sirup;" or "Extra heavily sweetened fruit juice(s) and water;" or "Extra heavily sweetened fruit juice(s).".	22° or more but not more than 35°.
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s).".	18° or more but less than 22°.
"Light sirup;" or "Lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s).".	14° or more but less than 18°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s).".	Less than 14°.
"In water"	Not applicable.
"In fruit juice(s) and water"	Do.
"in fruit juice(s)"	Do.

[38 FR 13363, May 21, 1973, as amended at 41 FR 15020, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.4024 Recommended fill of container.

The recommended fill of container for canned grapes is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be as full of grapes as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

§ 52.4025 Recommended minimum drained weights.

(a) *General.* (1) The minimum drained weight recommendations in table I of this subpart are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for ascertaining drained weight.* The drained weight of canned grapes is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937-in. ±3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and grapes less the weight of the dry sieve. A sieve 8 in. in diameter is used for the equivalent of No. 3 size cans (404 x 414) and smaller and a sieve 12 in. in diameter is used for containers larger than the equivalent of the No. 3 size can.

(c) *Definitions of symbols.* (1) X_d. The average drained weights of all the sample units in the sample.

(2) *LL.* Lower limit for drained weights of individual sample units.

(d) *Compliance with recommended drained weights.* A lot of canned grapes is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended minimum average drained weight (designated as X_d in table I); and

(2) The number of sample units which fail to meet the recommended drained weight lower limit for individuals (designated as *LL* in table I) does not exceed the applicable acceptance number specified in the single sampling plan of table II.

TABLE I—Recommended Minimum Drained Weights for Canned Grapes

Container designations (metal, unless otherwise stated)	Container size—overall dimensions		Overflow capacity (fluid ounces)	In any liquid medium (ounces)	
	Diameter (inches)	Height (inches)		LL	X_d
8Z tall	211	304		4.7	5
8 oz glass			8.2	4.7	5
No. 300	300	407		8.6	9
No. 1 tall	301	411		9.4	10
No. 303	303	406		9.4	10
No. 303 glass			17.0	9.4	10
No. 2	307	409		11.4	12
No. 2½	401	411		16.1	17
No. 2½ glass			28.35	16.1	17
No. 10	603	700		60.3	62

TABLE II—SINGLE SAMPLING PLAN FOR DRAINED WEIGHTS

Sample size (number of sample units)	3	6	13	21	29	38	48	60	72
Acceptance No	0	1	2	3	4	5	6	7	8

§ 52.4026 Recommended minimum fill weights.

(a) *General.* The minimum fill weight recommendations specified in Table III are not incorporated in the grades of the finished product since fill weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for ascertaining fill weight.* Fill weight is determined in accordance with the United States Standards for Inspection by Variables and the United States Standards for Determination of Fill Weights.

(c) *Definitions of terms and symbols.* "Subgroup" means a group of sample units representing a portion of a sample.

X'_{min} means the minimum lot average fill weight.

$LWL_{\bar{x}}$ means the lower warning limit for subgroup averages.

$LRL_{\bar{x}}$ means the lower reject limit for subgroup averages.

LWL means the lower warning limit for individual fill weight measurements.

LRL means the lower reject limit for individual fill weight measurements.

R' means a specified average range value.

R_{max} means a specified maximum range for a subgroup.

"Sampling allowance code" means a code letter on the sampling allowance chart of the U.S. Standards for Inspection by Variables. This letter identifies the appropriate line which gives the amount of sampling allowance to be applied to the specification average for fill weights in order to determine compliance with requirements for fill weight averages for a sample.

(d) *Compliance with recommended fill weights.* Compliance with the recommended fill weights shall be in accordance with the acceptance criteria specified in the U.S. Standards for Inspection by Variables and the U.S. Standards for Determination of Fill Weights.

TABLE III—RECOMMENDED FILL WEIGHT VALUES FOR CANNED GRAPES

Container designation (metal, unless otherwise designated)	X'_{min}	$LWL_{\bar{x}}$	$LRL_{\bar{x}}$	LWL	LRL	R'	R_{max}	Sampling allowance code
8 oz tall	6.0	5.8	5.7	5.6	5.4	0.50	1.0	C
8 oz glass	5.9	5.7	5.6	5.5	5.3	.50	1.0	C
No. 300	10.3	10.0	9.9	9.7	9.4	.70	1.50	E
No. 1 tall	11.2	10.9	10.7	10.5	10.1	.80	1.70	F
No. 303	11.4	11.1	10.9	10.7	10.3	.80	1.70	F
No. 303 glass	12.0	11.7	11.5	11.3	10.9	.80	1.70	F
No. 2	14.0	13.6	13.4	13.2	12.8	.90	2.00	G
No. 2½	20.3	19.8	19.6	19.3	18.8	1.20	2.50	I
No. 2½ glass	20.1	19.6	19.4	19.1	18.6	1.20	2.50	I
No. 10	74.5	73.5	73.0	72.3	71.2	2.60	5.40	T

FACTORS OF QUALITY

§ 52.4027 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Varietal characteristics.

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
(i) Color	20
(ii) Uniformity of size	20
(iii) Absence of defects	30
(iv) Character	30

Factors	Points
Total score	100

(b) *Definition of normal flavor.* "Normal flavor" means that the canned grapes are free from objectionable flavors and objectionable odors of any kind.

§ 52.4028 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "17 to 20 points" means "17, 18, 19, or 20 points").

§ 52.4029 Color.

(a) *General.* The factor of color does not apply to canned grapes which are artificially colored and spiced grapes and is not scored on such grapes but the other three factors (uniformity of size, absence of defects, and character) are scored and the total is multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) (*A*) *classification.* Canned grapes that possess a good color may be given a score of 17 to 20 points. "Good color" means that the grapes possess a practically uniform and bright, light green to greenish-yellow color, typical of well-developed Thompson seedless grapes that have been properly prepared and processed; and that not more than 10 percent, by weight, of the drained grapes may possess a noticeably dull color, or a light tan cast.

(c) (*B*) *classification.* If the canned grapes possess a reasonably good color, a score of 14 to 16 points may be given. Canned grapes that fall into this classification due to a noticeably dull color or a brownish cast shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule). "Reasonably good color" means that the grapes possess a reasonably uniform and reasonably bright color typical of Thompson seedless grapes that have been properly prepared and processed; and that the presence of grapes with a noticeably dull color or a brownish cast does not seriously affect the appearance or edibility of the product.

(d) (*SStd*) *classification.* Canned grapes that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 13 points and shall not be graded above substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.4030 Uniformity of size.

(a) (*A*) *classification.* Canned grapes that are practically uniform in size may be given a score of 17 to 20 points. "Practically uniform in size" means that the weight of the 5 percent, by count, consisting of the largest intact grapes in the sample unit is not more than twice the weight of the 5 percent, by count, consisting of the smallest intact grapes in the sample unit.

(b) (*B*) *classification.* If the canned grapes are reasonably uniform in size, a score of 14 to 16 points may be given. "Reasonably uniform in size" means that the grapes may vary in size as to appearance and weight provided such variation in size does not seriously affect the appearance of the product.

(c) (*SStd*) *classification.* Canned grapes that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 13 points and shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a partial limiting rule).

§ 52.4031 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from main stems (or portions thereof), harmless extraneous vegetable material, attached or loose capstems, mutilated grapes, and any other defects not specifically mentioned that affect the appearance or edibility of the product.

(b) *Definition of defects.* (1) "Blemished" means any discolored area on or in the grape, which singly or in the aggregate, materially affects the appearance of the grape. Cracks without discoloration are considered processing cracks and are not scored as defects. (See § 52.5032.)

(2) "Seriously blemished" means any blemished area on or in the grape (such as scab, scar tissue, and discolored cracks), which singly or in combination with other defects, seriously affects the appearance or edibility of the grape.

(3) "Mutilated" means that the grape is so spread open beyond the center or crushed or broken that it cannot be restored to its original shape or that the grape is severed into two or more separate parts.

(c) (*A*) *classification.* Canned grapes that are practically free from defects may be given a score of 26 to 30 points. "Practically free from defects" means that:

(1) There may be present not more than 1 main stem (or portion thereof) or one piece of other harmless extraneous vegetable material for each 100 oz, on an average, of total contents;

(2) There may be present not more than one capstem (either attached or loose) for each 4 ounces of total contents;

(3) Not more than a total of 5 percent, by weight, of the drained grapes may be mutilated, blemished, or seriously blemished: *Provided,* That not more than 3 percent, by weight, of the drained grapes may be seriously blemished; and

(4) The presence of main stems (or portions thereof), other harmless extraneous vegetable material, loose or attached capstems, mutilated grapes, blemished or seriously blemished grapes, and any other defects, individually or collectively does not materially affect the appearance or edibility of the product.

(d) (*B*) *classification.* Canned grapes that are reasonably free from defects may be given a score of 21 to 25 points. Canned grapes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) There may be present not more than a total of three main stems (or portions thereof) or pieces of other harmless extraneous vegetable material for each 100 ounces, on an average, of total contents;

(2) There may be present not more than one capstem (either attached or loose) for each 2 ounces of total contents;

(3) Not more than a total of 10 percent, by weight, of the drained grapes may be mutilated, blemished, or seriously blemished: *Provided,* That not more than 5 percent, by weight, of the drained grapes may be seriously blemished; and

(4) The presence of main stems (or portions thereof), other harmless extraneous vegetable material, loose or attached capstems, mutilated grapes, blemished or seriously blemished grapes, and any other defects, individually or collectively does not seriously affect the appearance or edibility of the product.

(e) (*SStd*) *classification.* Canned grapes that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.4032 Character.

(a) *General.* The factor of character refers to the fleshiness and texture of the canned grapes and to the presence of serious processing cracks.

(1) "Serious processing crack" means a crack without any discoloration that is split to or beyond the approximate center of the grape but is not a mutilated grape. Processing cracks that are not serious are not scored.

(b) (*A*) *classification.* Canned grapes that possess a good character may be given a score of 25 to 30 points. "Good character" means that the grapes are reasonably uniform in texture and are generally thick-fleshed and tender but not soft or flabby; and that not more than 5 percent, by weight, of the drained grapes may be affected by serious processing cracks.

(c) (*B*) *classification.* If the canned grapes possess a reasonably good character, a score of 21 to 24 points may be given. Canned grapes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the grapes are fairly uniform in texture and may be slightly soft but are not flabby; and that no more than 10 percent, by weight, of the drained grapes may be affected by serious processing cracks.

(d) *(SStd) classification.* Canned grapes that fail to meet the requirement of paragraph (c) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.4033 Ascertaining the grade of a lot.

The grade of a lot of canned grapes covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (7 CFR 52.1 to 52.87).

SCORE SHEET

§ 52.4034 Score sheet.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Vacuum (inches) ....
Drained weight (ounces) ....
Brix measurement ....
Sirup designation (extra heavy, heavy, etc.) ....

Factors		Score points	
Color	20	(A)	17-20
		(B)	[2] 14-16
		(SStd)	[1] 0-13
Uniformity of size	20	(A)	17-20
		(B)	14-16
		(SStd)	[2] 0-13
Absence of defects	30	(A)	26-30
		(B)	[1] 21-25
		(SStd)	[1] 0-20
Character	30	(A)	25-30
		(B)	[1] 21-24
		(SStd)	0-20
Total score	100		

Flavor ( ) normal ( ) off ....
Grade ....

[1] Indicates limiting rule.
[2] Indicates partial limiting rule.

Subpart—United States Standards for Grades of Frozen Breaded Onion Rings

SOURCE: 24 FR 7435, Sept. 16, 1959; 24 FR 8162, Oct. 8, 1959, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.4061 Product description.

"Frozen breaded onion rings," hereinafter referred to as "frozen onion rings," is the product prepared from clean and sound, fresh onion bulbs (Allium cepa) from which the root bases, tops and outer skin have been removed. The onion bulbs are sliced and separated into rings, coated with batter (or breaded) and may or may not be deep fried in a suitable fat or oil bath. The product is prepared and frozen in accordance with good commercial practice and maintained at temperatures necessary for the proper preservation of the product.

§ 52.4062 Types of frozen onion rings.

The type of frozen onion rings applies to the method of preparation of the product, and includes:

(a) "French fried" onion rings that have been deep fried in a suitable fat or oil bath prior to freezing.

(b) "Raw breaded" onion rings that have not been oil blanched or cooked prior to freezing.

§ 52.4063 Grades of frozen onion rings.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen onion rings that possess similar varietal characteristics; that possess a good flavor; that possess a good color; that are practically free from defects; that possess a good character; and for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 85 points: *Provided,* That the frozen onion rings may possess a reasonably good color and a reasonably good character if the total score is not less than 85 points.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen onion rings that possess similar varietal characteristics; that possess a reasonably good flavor; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably good character; and for those factors which are rated in accordance with the scoring system outlined in this subpart, the total score is not less than 70 points.

(c) "Substandard" is the quality of frozen onion rings that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.4064 Ascertaining the grade.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Varietal characteristics;

(ii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor which is rated is expressed numerically on the scale of 100. The maximum number of points that may be given for each such factor is:

Factors	Points
Color	30
Defects	40
Character	30
Total score	100

(b) *Evaluation of quality.* The rating for the factors of color and defects and the evaluation of similar varietal characteristics are determined by observing the product in the frozen state and after it has been prepared by heating in a suitable manner; the factors of character and flavor are evaluated within three minutes after the product has been prepared by heating in a suitable manner. (See § 52.4069.)

(c) *Definitions of requirements not rated by score points.* (1) "Good flavor" means a good characteristic flavor and odor of properly prepared frozen onion rings. Such flavor is free from rancidity and bitterness; from pronounced caramelized or scorched flavors and objectionable flavors and objectionable odors of any kind.

(2) "Reasonably good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

§ 52.4065 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example "25 to 30 points" means 25, 26, 27, 28, 29, or 30 points).

§ 52.4066 Color.

(a) (*A*) *classification.* Frozen onion rings that possess a good color may be given a score of 25 to 30 points. "Good color" means that the units possess a characteristic cream to golden color typical of properly prepared frozen onion rings; that the product is bright, practically uniform in color and after heating in a suitable manner, is practically free from units which vary markedly from the predominating color.

(b) (*B*) *classification.* If the frozen onion rings possess a reasonably good color a score of 21 to 24 points may be given. "Reasonably good color" means that the units may possess a light cream to brown color typical of frozen onion rings and may be variable in such typical color; that the product may be dull but not off color; and, after heating in a suitable manner, the variation in color of the units does not seriously affect the appearance of the product.

(c) (*SStd.*) *classification.* Frozen onion rings that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.4067 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, dark carbon specks, imperfect rings, and from blemished units.

(b) *Definitions.* (1) "Rings" are prepared from slices that are cut at approximately right angles to the longitudinal axis of the bulb with approximately parallel, and reasonably uniform, thickness and are separated into circular sections with open centers.

(2) "Imperfect rings" are:

(i) Units that have not been separated into a single or double ring of the slice;

(ii) Portions of rings or rings not joined to form a continuous circle;

(iii) Slices that lack a hole in the center; and

(iv) Rings that are extremely irregular in shape.

(3) "Harmless extraneous material" means loose roots, tops or other loose portions of plant material.

(4) "Blemished" means that the appearance or eating quality of the onion portion of the unit is materially affected by roots, tops, unpeeled areas, root crowns, seed stems, discoloration of the onion ingredient, or by other means.

(c) (*A*) *classification.* Frozen onion rings that are practically free from defects may be given a score of 34 to 40 points. "Practically free from defects" means that the surfaces of the units are practically free from carbon specks; that not more than 25 percent, by weight, of the units may be imperfect rings; and that for each 16 ounces, on an average, of the frozen product there may be present not more than:

(1) One piece of harmless extraneous vegetable material; and

(2) One blemished unit: *Provided,* That the harmless extraneous vegetable material and blemished units in single packages of less than 16 ounces do not materially affect the appearance of the product, and

(3) That any carbon specks, imperfect rings, harmless extraneous vegetable material, blemished units, or any defect not specifically mentioned, individually or collectively, do not materially affect the appearance or edibility of the product.

(d) (*B*) *classification.* Frozen onion rings that are reasonably free from defects may be given a score of 28 to 33 points. Frozen onion rings that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that the surfaces of the units are reasonably free from carbon specks; that not more than 40 percent, by weight, of the units may be imperfect rings; and that for each 16 ounces, on an average, of the frozen product there may be present not more than:

(1) Two pieces of harmless extraneous vegetable material; and

(2) Two blemished units: *Provided,* That the harmless extraneous vegetable material and blemished units in single packages of less than 16 ounces do not seriously affect the appearance of the product; and

(3) That any carbon specks, imperfect rings, harmless extraneous vegetable material, blemished units, or any defect not specifically mentioned, individually or collectively, do not seriously affect the appearance or edibility of the product.

(e) (*SStd*) *classification.* Frozen onion rings that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.4068 Character.

(a) (*A*) *classification.* Frozen onion rings that possess a good character may be given a score of 26 to 30 points. "Good character" means that after heating in a suitable manner, the external surfaces of the units are at least moderately crisp; the appearance and eating quality is not materially affected by cracking or unbreaded areas; the units are not oily, soggy, nor dry; and the onion ingredient is succulent and tender.

(b) (*B*) *classification.* If the frozen onion rings possess a reasonably good character a score of 21 to 25 points may be given. "Reasonably good character" means that after heating in a suitable manner, the external surfaces of the units are fairly crisp; the appearance and eating quality is not seriously affected by cracking or unbreaded areas; the units are not oily, soggy, nor dry; and the onion ingredient is reasonably tender.

(c) (*SStd.*) *classification*. Frozen onion rings that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

METHOD OF ANALYSIS

§ 52.4069 Method of analysis.

"Heated in a suitable manner" means heated by either of the following manners:

(a) *Oven method*. (1) Place the product while still in the frozen state on a piece of crumpled and partially straightened aluminum foil of sufficient size so that at least four ounces of the product may be spread in a single layer on the foil. If any of the units are stuck together they may be separated after the product remains in the heated oven for a few minutes. The aluminum foil may be supported by a piece of sheet metal or a shallow pan.

(2) Place foil and frozen contents into a properly ventilated oven preheated to 400 degrees F. and allow to remain 5 minutes or until the interior portions of the larger pieces are thoroughly cooked, or;

(b) *Deep frying*. Heating may be accomplished by any other method which will give comparable results such as deep frying in a suitable fat or oil bath at approximately 375 degrees F. until the larger pieces are thoroughly cooked.

LOT INSPECTION AND CERTIFICATION

§ 52.4070 Ascertaining the grade of a lot.

The grade of a lot of frozen onion rings covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.4071 Score sheet for frozen breaded onion rings.

Size and kind of container ……

Container mark:

Sample ……

Cases ……

Label ……

Net weight (ounces) ……

Type: ( ) French fried: ( ) Raw breaded ……

Factors		Score points	
Color	30	(A)	25-30
		(B)	21-24
		(SStd.)	[1] 0-20
Defects	40	(A)	34-40
		(B)	[1] 28-33
		(SStd.)	[1] 0-27
Character	30	(A)	26-30
		(B)	21-25
		(SStd.)	[1] 0-20
Total score	100		

Similar varieties ……

Flavor ( ) Good; ( ) Reasonably good; ( ) Off-flavor

Grade ……

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Sweetpotatoes

SOURCE: 27 FR 7624, Aug. 2, 1962, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, COLOR, STYLES, AND GRADES

§ 52.5001 Product description.

Frozen sweetpotatoes is the product prepared from the clean, sound root of sweetpotatoes (Ipomoea batatas) by washing, sorting, trimming, draining, and peeling, as the case may be. The product may or may not be cooked; may be prepared with the addition of suitable seasoning ingredient(s), sweetening ingredient(s), antioxidant(s), edible oil(s), spices, or other suitable additives permissible under the Federal Food, Drug, and Cosmetic Act. Such ingredients may or may not be admixed with the sweetpotatoes or they may be contained separately from the sweetpotato ingredient. When the sweetpotatoes have been cooked or partially cooked prior to freezing and are packed with a high density sirup and/or sugar to produce a "candied" effect, the frozen sweetpotatoes may be considered "Candied Sweetpotatoes" for the purposes of this subpart. In lieu of peeling, the product may be prepared as unpeeled sweetpotatoes in baked or stuffed form, with or without the addition of edible fat or oil to the peel. "Stuffed" form consists of cooked potatoes where the flesh has been removed from the peel, has been comminuted or crushed, and has been replaced in the peel or a preformed shell. The product is frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.5002 Colors of frozen sweetpotatoes.

(a) Golden.

(b) Yellow.

(c) Mixed (golden and yellow).

§ 52.5003 Styles of frozen sweetpotatoes.

(a) *Whole.* (1) Peeled.

(2) Baked (unpeeled).

(3) Stuffed (in peel or preformed shell).

(b) *Halved (or halves).* (1) Peeled.

(2) Stuffed (in peel or preformed shell).

(c) *Sliced.* This style consists of peeled units, cut longitudinally and/or crosswise, with flat-parallel or corrugated-parallel surfaces.

(d) *French-cut.* This style consists of peeled units cut into strips, commonly called French-style cut, which may have flat or corrugated surfaces.

(e) *Diced.* This style consists of peeled units cut into recognizable cube-shape units.

(f) *Cut (or chunks).* This style consists of peeled units of irregular sizes and shapes which do not conform to any of the foregoing single styles.

(g) *Mashed (or Souffle).* This style consists of peeled, cooked, and wholly comminuted or crushed sweetpotatoes, which may be molded or formed into pre-determined size and shape.

(h) *Mixed (or combination).* This style consists of peeled units which are a combination of two or more of the foregoing styles.

§ 52.5004 Grades of frozen sweetpotatoes.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen sweetpotatoes that (1) possess similar varietal characteristics, (2) have a normal flavor and odor, (3) have a good or reasonably good color, (4) are practically uniform, or reasonably uniform, in size for the applicable style, (5) are practically free from defects, (6) possess a good character, and (7) score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen sweetpotatoes that (1) may possess similar or mixed varietal color characteristics, (2) have a normal flavor and odor, (3) have a reasonably good color, (4) are reasonably uniform in size for the applicable style, (5) are reasonably free from defects, (6) possess a reasonably good character, and (7) score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen sweetpotatoes that fail to meet the requirements of U.S. Grade B.

Factors of Quality

§ 52.5005 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factors not rated by score points.*

(i) Varietal characteristics, as applicable.

(ii) Flavor and odor. A representative sample of the product is cooked to determine flavor and odor. "Normal flavor and odor" means that the flavor of the product before and after cooking is characteristic of properly prepared sweetpotatoes and is free from objectionable flavors and objectionable odors of any kind.

(2) *Factors rated by score points.*

(i) The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	20
Uniformity of size	20
Absence of defects	40
Character	20
Total score	100

(ii) Quality factors of color, uniformity of size, and absence of defects are determined by observing the product in the frozen or partially frozen state as soon as the units are separable into individual units, as the case may be, and after the product has been prepared by heating in a suitable manner; the factors of color and character (including consistency, as applicable) and flavor are evaluated after the product has been prepared by heating in a suitable manner as prescribed in this subpart.

§ 52.5006 Color.

(a) *General.* The color of the product (before and after heating) is evaluated on the internal color in whole baked, whole stuffed, and halved stuffed styles and on the overall external color appearance for all other styles. Color variations due to packing media consisting of brown sugar or sweetening mixtures including brown sugar and spices are considered characteristic.

(b) (*A*) *classification.* Frozen sweetpotatoes that possess a good color may be given a score of 18 to 20 points. "Good color" means a reasonably bright characteristic color (either yellow or golden, but not mixed) and that there may be reasonable variations of such characteristic color among the units, in each unit, or in the mass.

(c) (*B*) *classification.* If frozen sweetpotatoes possess a reasonably good color, a score of 16 or 17 points may be given. "Reasonably good color" means that the color (yellow, golden, or mixed) may be variable among the units, in each unit, or in the mass and that the color may be no more than slightly dull. Mixed color types shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a partial limiting rule).

(d) (*SStd*) *classification.* If frozen sweetpotatoes possess an off-color, a score of 0 to 15 points may be given. "Off-color" means that the over-all color is extremely dull, such as, but not limited to the presence of units that are extremely oxidized or the presence of units that are green colored. Frozen sweetpotatoes that score in this classification shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5007 Uniformity of size.

(a) *General.* The factor of uniformity of size for the styles of mashed and mixed frozen sweetpotatoes is not scored; the other three factors (color, absence of defects, and character) are scored and the total multiplied by 100 and divided by 80, dropping any fractions to determine the total score.

(b) *Definition of a "small unit."* A unit that weighs less than 1/10 ounce is considered a "small unit" when contained in sliced, French-cut, or cut styles.

(c) (*A*) *classification.* Frozen sweetpotatoes that are practically uniform in size may be given a score of 18 to 20 points. "Practically uniform in size" in styles other than mashed or mixed means that:

(1) The frozen sweetpotatoes comply with the size and uniformity requirements for (A) classification in Table 1 of this Subpart; and, in addition

(2) The over-all appearance of the product for the applicable style is not materially affected by units of abnormal size and shape.

(d) (*B*) *classification.* If the frozen sweetpotatoes are reasonably uniform in size, a score of 16 or 17 points may be given. "Reasonably uniform in size" in styles other than mashed or mixed means that:

(1) The frozen sweetpotatoes comply with the size and uniformity requirements for (B) classification in Table 1 of this subpart; and, in addition

(2) The over-all appearance of the product for the applicable style is not seriously affected by units of abnormal size and shape.

(e) (*SStd*) *classification.* Frozen sweetpotatoes that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—UNIFORMITY OF SIZE REQUIREMENTS FOR CERTAIN STYLES OF FROZEN SWEETPOTATOES

Styles, as applicable	Uniformity of size	
	(A) Classification	(B) Classification
Whole:		
(1) Peeled	May vary moderately in size	May vary considerably in size
(2) Baked (unpeeled)	The weight of the smallest unit is no less than 2/3 the weight of the largest unit	The weight of the smallest unit is no less than 1/2 the weight of the largest unit
(3) Stuffed		
Halves:		
(1) Peeled	May vary moderately in size	May vary considerably in size
(2) Stuffed	The weight of the smallest unit is no less than 2/3 the weight of the largest unit	The weight of the smallest unit is no less than 1/2 the weight of the largest unit

Styles, as applicable	Small units			
	(A) Classification		(B) Classification	
Sliced; French-cut; Cuts (or chunks)	May vary moderately in size except that the thickness of slices are reasonably uniform	Composite weight does not exceed 5% by weight of all units	May vary considerably in size except that the thickness of slices are fairly uniform	Composite weight does not exceed 10% by weight of all units
Diced	May vary moderately in size	No limits	May vary considerably in size	No limits

§ 52.5008 Defects.

(a) *General*. The factor of defects refers to the degree of freedom from particles of peel in peeled styles; broken skins and broken or distorted preformed shells in whole baked, whole stuffed, and halves stuffed styles; primary and secondary rootlets, fibrous ends, discolored areas, and corky areas, or from other defects that detract from the appearance or edibility of the unit or product.

(b) (*A*) *classification*. Frozen sweetpotatoes of any style that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" has the following meaning for the applicable styles:

(1) *Whole baked; whole stuffed; halves stuffed*. The peel or shell is not broken nor the shell distorted to any noticeable extent other than in the opening in whole stuffed style; and the units are practically free from primary and secondary rootlets, internal fibers, internal corky areas, and any other defects which do not affect materially the appearance or the edibility of the product.

(2) *Whole peeled; halves peeled; mashed*. The product may contain not more than a slight amount of particles of peel, primary and secondary rootlets, untrimmed fibrous ends, discolored areas, corky areas, and any other defects which do not affect materially the appearance or the edibility of the product.

(3) *All other styles*. The aggregate weight of all defective units does not exceed 5 percent, by weight, of all the units. One unit in a container is permitted to be defective if such unit exceeds the allowance of 5 percent, by weight: *Provided*, That in all containers comprising the sample such defective units do not exceed 5 percent, by weight, of all the units, and the overall appearance and edibility of the

product is not materially affected by the presence of defective units.

(c) (*B*) *classification.* If the frozen sweetpotatoes of any style are reasonably free from defects, a score of 32 to 35 points may be given. Frozen sweetpotatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" has the following meaning for the applicable styles:

(1) *Whole baked; whole stuffed; halves stuffed.* The peel or shell may be broken or the shell distorted to some extent other than in the opening in whole stuffed style; and the units are reasonably free from primary and secondary rootlets, internal fibers, internal corky areas, and any other defects which do not affect seriously the appearance or edibility of the product.

(2) *Whole peeled; halves peeled; mashed.* The product may contain not more than a moderate amount of particles of peel, primary or secondary rootlets, untrimmed fibrous ends, discolored areas, corky areas, and any other defects which do not affect seriously the appearance or edibility of the product.

(3) *All other styles.* The aggregate weight of all defective units does not exceed 10 percent, by weight, of all the units. One unit in a container is permitted to be defective if such unit exceeds the allowance of 10 percent, by weight: *Provided,* That in all containers comprising the sample such defective units do not exceed 10 percent, by weight, of all the units, and the overall appearance and edibility of the product is not seriously affected by the presence of defective units.

(d) (*SStd*) *classification.* Frozen sweetpotatoes that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5009 Character.

(a) *General.* The factor of character refers to the texture or consistency and condition of the flesh, the degree of freedom from pithy units and tough or coarse fibers, the uniformity of tenderness of the frozen sweetpotatoes after heating in a suitable manner, and the tendency of the frozen sweetpotatoes (except for mashed style) to retain their apparent original conformation and size without disintegration.

(b) (*A*) *classification.* Frozen sweetpotatoes that possess a good character may be given a score of 18 to 20 points. "Good character and consistency" has the following meaning for the applicable styles:

(1) *Whole baked.* The flesh is not soggy nor dry and is practically free from tough or coarse internal fibers.

(2) *Whole stuffed; halves stuffed; mashed.* The mass or stuffing possesses a uniformly smooth texture and consistency and is free from lumps and tough or coarse fibers.

(3) *All other styles.* The units possess a uniformly smooth texture, are practically free from tough or coarse fibers, and may be firm to soft but hold their apparent original conformation and size without material disintegration.

(c) (*B*) *classification.* If the frozen sweetpotatoes possess a reasonably good character, a score of 16 or 17 points may be given. "Reasonably good character and consistency" has the following meaning for the applicable styles:

(1) *Whole baked.* The flesh is not excessively dry and is reasonably free from tough or coarse internal fibers.

(2) *Whole stuffed; halves stuffed; mashed.* The texture and consistency of the mass or stuffing may be coarse and stiff but practically free from lumps, and not more than a few tough or coarse fibers may be present.

(3) *All other styles.* The units possess a reasonably uniform smooth texture, are reasonably free from tough or coarse fibers, and 75 percent, by weight, or more of the units hold their apparent original conformation and size without material disintegration.

(d) (*SStd.*) *classification.* Frozen sweetpotatoes that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATION AND METHOD OF ANALYSIS

§ 52.5010 Preparation by heating.

"Prepared by heating in a suitable manner" means by either of the following applicable methods:

(a) *Oven method.* (Applicable to any style.)

(1) Place the product and packing media, if any, in a shallow pan (or use the open carton if suitable for heating) of sufficient size so that the product may be spread to a uniform thickness of not more than 1½ inches; and

(2) Place pan (or open carton) and frozen contents into a properly ventilated oven, preheated to 375 degrees F., and allow to remain 30 minutes or longer until the interior portions of the larger units are thoroughly heated and cooked; or

(b) *Pot method.* (Not applicable to baked and stuffed styles). Place the product while still in the frozen state in a stainless steel cooking utensil and add enough water to cover the product. Bring to a boil, cover, and simmer until the larger units are thoroughly cooked.

LOT INSPECTION AND CERTIFICATION

§ 52.5011 Ascertaining the grade of a lot.

The grade of a lot of frozen sweetpotatoes covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.5012 Score sheet for frozen sweet-potatoes.

Size and kind of container ....
Container mark or identification ....
Label ....
Package contents (ounces) ....
Weight of media (ounces)—if contained separately ....
Style of pack of sweetpotatoes ....
Count (whole; halves) ....
Type of media (if any) ....
Brix measurement of media (if liquid and contained separately) ....

Color (yellow; golden; mixed) ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	[2] 16–17
		(SStd.)	[1] 0–15
Uniformity of size	20	(A)	18–20
		(B)	16–17
		(SStd.)	[1] 0–15
Absence of defects	40	(A)	36–40
		(B)	[1] 32–35
		(SStd.)	[1] 0–31
Character	20	(A)	18–20
		(B)	[1] 16–17
		(SStd.)	[1] 0–15
Total score	100		

Flavor and odor ....
Grade ....

[1] Limiting rule.

[2] "Mixed Color" limited to Grade B or lower grade (partial limit limiting rule).

Subpart—United States Standards for Grades of Tomato Paste

SOURCE: 42 FR 41844, Aug. 19, 1977, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.5041 Product description.

(a) "Tomato Paste" is the clean, sound wholesome product as defined in the Standard of Identity for Tomato Paste (21 CFR 155.191) issued pursuant to the Federal Food, Drug, and Cosmetic Act and contains not less than 24.0 percent of natural tomato soluble solids.

(b) The standards in this subpart cover canned tomato paste processed by heat to assure preservation in hermetically sealed containers as well as tomato paste which may be preserved by other means.

§ 52.5042 Concentration.

The degree of concentration is not considered a factor of quality for the purposes of these standards but the following designations of concentration may be used in connection with these standards for the applicable natural tomato soluble solids group:

NATURAL TOMATO SOLUBLE SOLIDS

Extra heavy concentration	39.3 percent or more.
Heavy concentration	32 percent or more, but less than 39.3 percent.

NATURAL TOMATO SOLUBLE SOLIDS—Continued

Medium concentration	28 percent or more, but less than 32 percent.
Light concentration	24 percent or more, but less than 28 percent.

§ 52.5043 Texture.

(a) *General.* Texture is the degree of fineness or coarseness of the product. Texture is classified when the product is diluted with water to between 8 percent and 9 percent, inclusive, of natural tomato soluble solids.

(b) *Kinds of texture.* (1) "Fine" texture means a smooth, uniform finish.

(2) "Coarse" texture means a coarse, slightly granular finish.

§ 52.5044 Grades.

(a) *"U.S. Grade A"* (or *"U.S. Fancy"*) is the quality of tomato paste that:

(1) Has a good flavor and odor,

(2) Has a good color,

(3) Is practically free from defects, and

(4) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) *"U.S. Grade C"* (or *"U.S. Standard"*) is the quality of tomato paste that:

(1) Has at least a fairly good flavor and odor,

(2) Has at least a fairly good color,

(3) Is at least fairly free from defects, and

(4) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) *"Substandard"* is the grade of tomato paste that fails to meet the requirements of "U.S. Grade C."

§ 52.5045 Recommended fill of container.

It is recommended that containers of tomato paste be filled as full as practicable without impairment of quality.

§ 52.5046 Determining the grade of a sample unit.

(a) *General.* The grade of a sample unit of tomato paste is determined by considering the factor of flavor and odor which is not scored, the ratings for the factors of color and defects which are scored, the total score, and the limiting rules which apply.

(b) *Factors not rated by score points*—(1) *Flavor and odor.* (i) The flavor and odor of the product is determined on undiluted samples and also after dilution with water to between 8 percent and 9 percent, inclusive, of natural tomato soluble solids.

(ii) *"Good flavor and odor"* means a distinct tomato paste flavor characteristic of ripe, good quality tomatoes and inclusive of any optional ingredient which may have been added. Such flavor and odor may be no more than slightly affected, by any one or combination of the following: Stems, sepals, leaves, crushed seeds, cores; by immature, soured, or overripe tomatoes; from the effects of unsatisfactory preparation, processing, or storage; nor from any other factor not specifically mentioned.

(iii) *"Fairly good flavor and odor"* means a characteristic tomato paste flavor and inclusive of any optional ingredient which may have been added. Such flavor and odor may be affected, but not to a serious degree, by any one or combination of the following: Stems, sepals, leaves, crushed seeds, cores; by immature, soured, or overripe tomatoes; from the effects of unsatisfactory preparation, processing, or storage; or from any other factor not specifically mentioned.

(iv) *"Off flavor and odor"* means tomato paste flavor that fails to meet the requirements of "fairly good flavor and odor" or which has a flavor and/or odor which is seriously objectionable.

(c) *Factors rated by score points.* The relative importance of each scoring factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	50
Defects	50
Total score	100

§ 52.5047 Determining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be determined numerically. The numerical range within each factor is inclusive. (For example, "45 to 50 points" means 45, 46, 47, 48, 49 or 50 points.)

§ 52.5048 Color.

(a) *General.* The amount of red in tomato paste is determined by comparing the color or the product, diluted with water to 8.5 percent ±0.1 percent) of natural tomato soluble solids (N.T.S.S.) with that produced by spinning a combination of the following Munsell color discs:

Disc 1—Red (5R 2.6/13) (glossy finish).
Disc 2—Yellow (2.5YR 5/12) (glossy finish).
Disc 3—Black (N1) (glossy finish).
Disc 4—Grey (N4) (mat finish).

Such comparison is made under a diffused light source of approximately 250 foot candle (candela) intensity and having a spectral quality approximating that of daylight under a moderately overcast sky, and a color temperature of 7,500° Kelvin ±200°. With the light source directly over the disc and diluted product, observation is made at an angle of 45° and at a distance of 12 or more inches from the product.

(b) *Availability of color reference.* The colors referred to in this section are available from the approved supplier under a license from the U.S. Department of Agriculture:

Munsell Color Co., 2441 North Calvert Street, Baltimore, Md. 21218.

(c) *Use of electronic color meters.* (1) Values that may be used for conversion to a numerical score point color evaluation of the product, diluted to 8.5 percent (±0.1 percent) natural tomato soluble solids, may be determined by any electronic color meter system approved by the United States Department of Agriculture.

(2) The values derived with the approved electronic color meter system shall be resolvable into a calculated numerical score point by use of any appropriate conversion formula that has been approved by the USDA.

(d) *Grade A classification.* (1) Tomato paste that has a good color may be given a score of 45 to 50 points. "Good color" means a bright, typical, red tomato paste color. Such color, when the product is diluted and observed as specified in this section, is as red as, or more red than that produced by spinning the Munsell color discs in the following combinations or an equivalent of such composite color:

65 percent of the area of Disc 1; 21 percent of the area of Disc 2, and 14 percent of the area of either Disc 3 or Disc 4; or
7 percent of the area of Disc 3 and 7 percent of the area of Disc 4, whichever most nearly matches the appearance of the diluted sample.

(2) Any calculated numerical score of 45 points for a diluted product shall be equivalent to a visually evaluated color score of 45 points produced under the conditions specified in paragraph (d)(1) of this section. Proportionately higher calculated numerical scores or visually assigned score points may be assigned to diluted products which show more redness.

(e) *Grade C classification.* (1) Tomato paste that has at least a fairly good color may be given a score of 40 to 44 points. Tomato paste that falls into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a typical red tomato paste color which may be slightly dull or may have a slightly brownish cast. Such color, when the product is diluted and observed as specified in this section, is as red as, or more red than, that produced by spinning the Munsell color discs in the following combinations or an equivalent of such composite color:

53 percent of the area of Disc 1;
28 percent of the area of Disc 2;
19 percent of the area of either Disc 3 or Disc 4; or
9½ percent of the area of Disc 3 and 9½ percent of the area of Disc 4, whichever most nearly matches the appearance of the diluted sample.

(2) Any calculated numerical score of 40 points for a diluted product shall be equivalent to a visually evaluated color score of 40 points produced under the conditions specified in para-

graph (e)(1) of this section. Proportionately higher calculated numerical scores or visually assigned score points may be assigned to diluted products which show more redness.

(f) *Substandard classification.* Tomato paste that fails to meet the requirements of paragraph (e) of this section may be given a score of 0 to 39 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.5049 Defects.

(a) *General.* This factor is concerned with the degree of freedom from defects such as dark specks or scale-like particles, seeds or objectionable particles of seeds, objectionable tomato peel, harmless extraneous material, or any other similar substances.

(b) *Grade A classification.* Tomato paste that is practically free from defects may be given a score of 45 to 50 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or usability of the product.

(c) *Grade C classification.* Tomato paste that is fairly free from defects may be given a score of 40 to 44 points. Tomato paste that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score of the product (this is a limiting rule). "Fairly free from defects" means that any defects present may be noticeable but are not so large, so numerous, nor of such contrasting color or nature as to seriously affect the appearance or usability of the product.

(d) *Substandard classification.* Tomato paste that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 39 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5050 Determining the grade of a lot.

The grade of a lot of tomato paste covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.83).

§ 52.5051 Score sheet.

Size and kind of container ....
Label ....
Container mark or identification ....
Net weight ....
Vacuum (inches) ....
Texture (fine or coarse) ....
Natural tomato soluble solids (percent) ....

Factors		Score points	
Color	50	(A)	45-50
		(C)	[1] 40-44
		(SStd)	[1] 0-39
Defects	50	(A)	45-50
		(C)	[1] 40-44
		(SStd)	[1] 0-39
Total score	100		

Flavor and odor:
Good, Fairly Good, Off ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards For Grades of Canned Tomato Puree (Tomato Pulp)[1]

Source: 43 FR 15611, Apr. 14, 1978, unless otherwise noted.

§ 52.5081 Product description.

"Tomato Puree" (or "Tomato Pulp"), hereinafter referred to as "Tomato Puree," is the clean, sound, wholesome product as defined in the standard of Identity for Tomato Puree (Tomato Pulp) (21 CFR 155.192), issued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.5082 Concentration.

(a) The degree of concentration is not considered a factor of quality for the purposes of these standards, but tomato puree contains not less than 8 percent, but less than 24 percent of natural tomato soluble solids.

(b) The following designations of concentration may be used in connection with these standards for the applicable natural tomato soluble solids groups:

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act, or with applicable State laws and regulations.

NATURAL TOMATO SOLUBLE SOLIDS

Extra heavy concentration	15.0 pct or more, but less than 24 pct.
Heavy concentration	11.3 pct or more, but less than 15 pct.
Medium concentration	10.2 pct or more, but less than 11.3 pct.
Light concentration	8 pct or more, but less than 10.2 pct.

§ 52.5083 Texture.

(a) *General.* Texture is the degree of fineness or coarseness of the product. Texture is classified when the product is diluted with water, when necessary, to between 8 percent and 9 percent, inclusive, of natural tomato soluble solids.

(b) *Kinds of texture.* (1) "Fine" texture means a smooth uniform finish.

(2) "Coarse" texture means a coarse slightly granular finish.

§ 52.5084 Grades.

(a) "U.S. Grade A" is the quality of tomato puree that:

(1) Has a good flavor and odor;

(2) Has a good color;

(3) Is practically free from defects; and

(4) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" is the quality of tomato puree that:

(1) Has at least a fairly good flavor and odor;

(2) Has at least a fairly good color;

(3) Is at least fairly free from defects; and

(4) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the grade of tomato puree that fails to meet the requirements of "U.S. Grade C."

§ 52.5085 Recommended fill of container.

It is recommended that containers of tomato puree be filled as full as practicable without impairment of quality.

§ 52.5086 Determining the grade of a sample unit.

(a) *General.* The grade of a sample unit of tomato puree is determined by considering the factor of flavor and odor which is not scored, the rating for the factors of color and defects which are scored, the total score, and the limiting rules which apply.

(b) *Factors not rated by score points*—(1) *Flavor and odor.* (i) The flavor and odor of the product is determined on undiluted samples and also after dilution with water to between 8 percent and 9 percent, inclusive, of natural tomato soluble solids.

(ii) "Good flavor and odor" means distinct tomato puree flavor characteristic of ripe, good quality tomatoes and inclusive of salt which may be added. Such flavor and odor may be no more than slightly affected by any one or combination of the following: Stems, sepals, leaves, crushed seeds, cores; by immature, soured, or overripe tomatoes; from the effects of unsatisfactory preparation, processing, or storage; or from any other factor not specifically mentioned.

(iii) "Fairly good flavor and odor" means a characteristic tomato puree flavor, inclusive of salt which may be added. Such flavor and odor may be affected, but not to a serious degree, by any one or combination of the following: Stems, sepals, leaves, crushed seeds, cores; by immature, soured, or overripe tomatoes; or from the effects of unsatisfactory preparation, processing, or storage; or from any other factor not specifically mentioned.

(iv) "Off flavor and odor" means tomato puree flavor that fails to meet the requirements of "fairly good flavor and odor" or which possesses a flavor and/or odor which is seriously objectionable.

(c) *Factors rated by score points.* The relative importance of each scoring factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	50
Defects	50
Total	100

§ 52.5087 Determining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be determined numerically. The numerical range within each factor is inclusive. (For example, "45 to 50 points" means 45, 46, 47, 48, 49, or 50 points.)

§ 52.5088 Color.

(a) *General.* The amount of red in tomato puree is determined by comparing the color of the product, diluted, if necessary, with water to between 8.0 percent and 8.6 percent, inclusive, of natural tomato soluble solids (N.T.S.S.) with that produced by spinning a combination of the following Munsell color discs:

Disc 1—Red (5R 2.6/13) (glossy finish).
Disc 2—Yellow (2.5YR 5/12) (glossy finish).
Disc 3—Black (N1) (glossy finish).
Disc 4—Grey (N4) (mat finish).

Such comparison is made under a diffused light source of approximately 250 foot-candle (candela) intensity and having a spectral quality approximating that of daylight under a moderately overcast sky, and a color temperature of 7,500 degree Kelvin ±200 degrees. With the light source directly over the disc and product, observation is made at an angle of 45 degrees and at a distance of 12 or more inches from the product.

(b) *Availability of color reference.* The colors referred to in this section are available from the approved supplier under a license from the U.S. Department of Agriculture:

Munsell Color Co.
2441 North Calvert Street
Baltimore, Maryland 21218

(c) *Use of electronic color meters.* (1) Values that may be used for conversion to a numerical score point color evaluation of the product may be determined by any electronic color meter system approved by the United States Department of Agriculture. Such values may be determined by electronic color meters only on tomato puree that has a concentration of, or may be diluted with water to, 8.5 percent (±0.1 percent) natural tomato soluble solids (N.T.S.S.).

(2) The values derived with the approved electronic color meter system shall be resolvable into a calculated numerical score point by use of any appropriate conversion formula that has been approved by the USDA.

(d) *Grade A classification.* (1) Tomato puree that has a good color may be given a score of 45 to 50 points. "Good color" means a bright, typical, red tomato puree color. Such color, when the product of the proper concentration and observed as specified in this section, is as red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color:

65 percent of the area of Disc 1;
21 percent of the area of Disc 2; and
14 percent of the area of either Disc 3 or Disc 4; or
7 percent of the area of Disc 3 and 7 percent of the area of Disc 4, whichever most nearly matches the appearance of the sample.

(2) Any calculated numerical score of 45 points, for a product of the proper concentration, shall be equivalent to a visually evaluated color score of 45 points produced under the conditions specified in paragraph (d)(1) of this section. Proportionately higher calculated numerical scores or visually assigned score points may be assigned to products of the proper concentration which show more redness.

(e) *Grade C classification.* (1) Tomato puree that has at least a fairly good color may be given a score of 40 to 44 points. Tomato puree that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means a typical red tomato puree color which may be slightly dull or have a slight yellow, yellow-orange, or brownish cast. Such color, when the product is of the proper concentration and is observed as specified in this section, is as red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations or an equivalent of such composite color:

53 percent of the area of Disc 1;
28 percent of the area of Disc 2; and
19 percent of the area of either Disc 3 or Disc 4; or
9½ percent of the area of Disc 3 and 9½ percent of the area of Disc 4, whichever most nearly matches the appearance of the sample.

(2) Any calculated numerical score of 40 points, for a product of the proper concentration, shall be equivalent to a visually evaluated color score of 40 points produced under the conditions specified in paragraph (e)(1) of this section. Proportionately higher calculated numerical scores or visually assigned score points may be assigned to products of the proper concentration which show more redness.

(f) *Substandard classification.* Tomato puree that fails to meet the requirements of paragraph (e) of this section may be given a score of 0 to 39 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5089 Defects.

(a) *General.* This factor is concerned with the degree of freedom from defects such as dark specks or scale-like particles, seeds or objectionable particles of seeds, objectionable tomato peel, harmless extraneous material, or any other similar substances.

(b) *Grade A classification.* Tomato puree that is practically free from defects may be given a score of 45 to 50 points. "Practically free from defects" means that any defects present do not more than slightly affect the appearance or usability of the product.

(c) *Grade C classification.* Tomato puree that is at least fairly free from defects may be given a score of 40 to 44 points. Tomato puree that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score of the product (this is a limiting rule). "Fairly free from defects" means that any defects present may be noticeable but are not so large, so numerous, nor of such contrasting color or nature as to seriously affect the appearance or usability of the product.

(d) *Substandard classification.* Tomato puree that fails to meet the requirements of paragraph (c) of this section may by given a score of 0 to 39 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5090 Determining the grade of a lot.

The grade of a lot of tomato puree covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.83).

§ 52.5091 Score sheet.

Size and kind of container
Label
Container mark or identification
Net weight
Vacuum (inches)
Texture (fine or coarse)
Natural tomato soluble solids (percent)

Factors		Score points	
Color	50	(A)	45–50
		(C)	[1]40–44
		(SStd.)	[1]0–39
Defects	50	(A)	45–50
		(C)	[1]40–44
		(SStd.)	[1]0–39
Total score	100		

Flavor and odor
Good
Fairly good
Off
Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Tomatoes

AUTHORITY: Agricultural Marketing Act of 1946, secs. 203, 205, 60 Stat. 1087, as amended 1090, as amended (7 U.S.C. 1622, 1624).

SOURCE: 55 FR 9413, Mar. 14, 1990, unless otherwise noted.

§ 52.5161 Product description.

The products to which these standards apply are defined in the Standards of Identity issued under the Federal Food, Drug, and Cosmetic Act as:

(a) *Canned tomatoes* (21 CFR 155.190); and

(b) *Canned stewed tomatoes* (21 CFR 155.190).

§ 52.5162 Styles.

(a) *Whole* means tomatoes, peeled or unpeeled, of any size that are substantially whole or almost whole.

(b) *Sliced* means tomatoes, peeled or unpeeled, that have been cut into units of approximately uniform thickness.

(c) *Halves* means tomatoes, peeled or unpeeled, that have been cut into two approximately equal halves.

(d) *Wedges* means tomatoes, peeled or unpeeled, that have been cut into approximate quarters or wedge-shaped sectors.

(e) *Diced* means tomatoes, peeled or unpeeled, that have been cut into approximate cube-shaped units.

§ 52.5163 Type of pack.

Regular pack means tomatoes packed in a medium consisting of tomato juice, tomato puree, or tomato paste.

§ 52.5164 Definitions of terms.

(a) *Character* means the degree of firmness normally found when tomatoes have been processed using good manufacturing practices as defined in 21 CFR part 110. Canned and stewed tomatoes that, when fully cooked, are *excessively soft or mushy* are considered to lack character. *Excessively soft* is further defined for all styles and means that the unit may disintegrate upon handling, has evidence of sloughing (erosion of the tomato tissue) or has ragged edges, and has lost ability to retain shape. For the purposes of these grade standards, character is classified as good, reasonably good and fairly good. There is no substandard classification for the quality factor of character.

(1) *Good character* in whole, halves, wedges, or sliced tomatoes is defined as tomatoes in which not more than 15 percent by count are excessively soft or mushy. *Good character* in diced tomatoes is defined as diced tomatoes in which not more than 15 percent by weight are excessively soft or mushy.

(2) *Reasonably good character* in whole, halves, wedges, or sliced tomatoes is defined as tomatoes in which not more than 25 percent by count are excessively soft or mushy. *Reasonably good character* in diced tomatoes is defined as diced tomatoes in which not more than 25 percent by weight are excessively soft or mushy.

(3) *Fairly good character* in whole, halves, wedges, or sliced tomatoes is defined as tomatoes in which more than 25 percent by count are excessively soft or mushy. *Fairly good character* in diced tomatoes is defined as diced tomatoes in which more than 25 percent by weight are excessively soft or mushy.

(b) *Color*— (1) *USDA Tomato Red* means the color of an USDA approved plastic color comparator.

(2) *Minimum Red for Canned Tomatoes* means the equivalent of any of the colors produced by blending the combinations of the following Munsell Color discs of equal diameter when placed as indicated.

Red—Munsell 5 R 2.6/13 (glossy finish)
Yellow—Munsell 2.5 YR 5/12 (glossy finish)
Black—Munsell N 1 (glossy finish)
Gray—Munsell N 4 (mat finish)

(i) The discs are placed so that one-third of the area of the Red disc, and not more than one-third of the area of the Yellow disc, are exposed. The exposed areas of the Black and Gray discs make up the remainder of the area.

(ii) To determine U.S. Grade C Color for canned and stewed tomatoes, apply the test for strength and redness of color outlined in 21 CFR 155.190(b).

(c) *Defects* refer to objectionable core material, tomato peel, extraneous vegetable material (EVM), blemished areas, and discolored portions that affect the appearance and eating quality of the product as further described below.

(1) *Blemished* areas are abnormal areas on the tomatoes which contrast strongly in color and/or texture with normal tomato tissue. Blemished areas may show objectionable discoloration

ranging from light to dark discoloration. Blemished areas include but are not limited to scarred, raised, scabby tissue; darkened, tough areas which remain around the core area; internal or external dark tissue around blossom ends of the tomatoes; or any other areas that are objectionable or unsightly.

(2) *Discolored* portions are imperfections of the tomato tissue which may not be of strong contrasting color with respect to the tomato tissue but which detract slightly from the appearance of the product. Examples include sunburned areas, internal browning or tobacco mosaic, cloudy spots or ghost spots.

(3) *Extraneous vegetable material* (*EVM*) is vegetable material that is not harmful and includes, but is not limited to, whole or parts of stems, calyx bracts, tomato leaves or portions thereof, sprouted seeds, and other similar vegetable material which may not be part of the tomato plant.

(4) *Objectionable core material* is tomato material associated with the core of the tomato which detracts from the appearance or edibility of the product and includes tough fibers and tough or slightly discolored tomato tissue.

(5) *Peel* means the loose or attached skin of the tomato.

(d) *Drained tomatoes* means all of the tomato material that remains on the sieve after draining as prescribed in 21 CFR 155.190.

(e) *Flavor and odor*—(1) *Normal flavor and odor* means a typical characteristic flavor and odor of mature tomatoes.

(2) *Off-flavor and off-odor* means any flavor or odor other than typical characteristic flavor and odor of mature tomatoes that is objectionable.

(f) *Whole or almost whole*, for whole style only, regardless of size, means that:

(1) The contour of the tomato is not materially affected by coring, trimming, or other means;

(2) The tomato may be cracked or split but not to the extent that there is material loss of seeds or placenta (gelatinous mass filling the seed cavity); and

(3) The tomato units may be restored to their approximate original shape during handling.

§ 52.5165 Fill of container.

The standard of fill of container for canned tomatoes (21 CFR 155.190 (c)) requires that the product occupy not less than 90 percent of the water capacity of the container.

§ 52.5166 Minimum drained weight averages.

(a) The average minimum drained weight requirements for U.S. Grades are listed in Table I in § 52.5170.

(b) The drained weight must not be less than 50 percent of the weight of water required to fill the container.

(c) The minimum drained weight averages are based on equalization of the product 15 days or more after the product has been canned.

(d) The method of ascertaining drained weight for all styles of canned and stewed tomatoes is found in 21 CFR 155.190 except that the U.S. Standard Number 8 circular sieve is used in lieu of a U.S. Standard Number 2 circular sieve for "sliced" and "diced" styles of canned and stewed tomatoes.

(e) Meeting drained weight averages. A lot of canned tomatoes is considered as meeting the minimum drained weight averages if the following criteria are met:

(1) The average of the drained weights from all the containers in the sample meets the average drained weight in Table I in § 52.5170.

(2) The drained weights from the individual containers which do not meet the minimum are:

(i) For No. 2½ can size and smaller, *all styles except diced:* Not more than 0.7 ounce lower than the minimum average.

(ii) For No. 2½ can size and smaller, *diced* style: Not more than 0.5 ounce lower than the minimum average.

(iii) For No. 10 cans, *all styles*: Not more than 2.0 ounces below the minimum average; and

(3) The number of containers in the sample which do not meet the requirements of paragraph (e)(2) of this section, does not exceed the acceptance

number prescribed for the sample size in 7 CFR 52.38, Table I.

§ 52.5167 Sample unit sizes.

(a) For "whole", "halves", and "wedges" styles, the sample unit size is the amount of product specified to be used for inspection in 7 CFR 52.38, Table I.

(b) For "sliced" and "diced" styles, the sample unit size is the same as indicated in paragraph (a) of this section *Except* in containers Number 10 (No. 10) can size and larger, an optional sample unit size of 32 ounces per container (drained weight) is permitted.

§ 52.5168 Grades.

(a) *U.S. Grade A* is the quality of canned tomatoes that meets the applicable requirements of tables I, II, III, IV, and V of § 52.5170, and scores not less than 90 points.

(b) *U.S. Grade B* is the quality of canned tomatoes that meets the applicable requirements of Tables I, II, III, IV, and V of § 52.5170, and scores not less than 80 points.

(c) *U.S. Grade C* is the quality of canned tomatoes that meets the applicable rquirements of Tables I, II, III, IV, and V of § 52.5170, and scores not less than 70 points.

(d) *Substandard* is the quality of canned tomatoes that fails the requirements for U.S. Grade C.

[55 FR 9413, Mar. 14, 1990; 55 FR 12805, April 6, 1990]

§ 52.5169 Factors of quality.

The grade of canned tomatoes is based on the following quality factors:

(a) Drained weight;

(b) Character;

(c) Color;

(d) Wholeness ("whole style" only);

(e) Flavor and odor; and

(f) Defects.

§ 52.5170 Requirements for grades.

TABLE I.—MINIMUM DRAINED WEIGHT AVERAGES FOR CANNED TOMATOES AND STEWED TOMATOES ALL GRADES, ALL STYLES

[English (Avoirdupois) weights]

Container	Container dimensions [1]	Average drained weight (ounces)	
		U.S. grade A and B	U.S. grade C
8 oz. Tall	211 x 304	5.0	4.3
No. 300	300 x 407	8.8	7.6
No. 303	303 x 406	9.8	8.5
No. 2	307 x 409	11.9	10.3
No. 2½	401 x 411	17.3	14.9
No. 10	603 x 700	63.5	54.7

[1] The first figure in this column represents the diameter of the container and the second figure represents the height. The first digit in each number represents inches and the second two digits represent sixteenths of an inch. Thus 307 is three and seven-sixteenths inches.

TABLE II.—MAXIMUM DEFECTS PERMITTED IN EACH GRADE ALL STYLES

	Defect (aggregate area)	In a single container		In total sample representing a lot; in cans of any size [per pound of total contents of all containers (average)]
		In cans of less than 2 pounds total contents (in any container)	In cans of 2 or more pounds total contents (equivalent amount per pound of contents of any container)	
Grade A	Peel Blemished areas Discolored portions	2 square inches ⅛ square inch ½ square inch	1 square inch 1/16 square inch ¼ square inch	½ square inch 1/16 square inch ¼ square inch
Grade B	Peel Blemished areas Discolored portions	3 square inches ¼ square inch 1 square inch	2 square inches ⅛ square inch ½ square inch	1.06 square inches ⅛ square inch ½ square inch
Grade C	Peel Blemished areas Discolored portions	No limit ½ square inch 1½ square inches	No limit ¼ square inch ¾ square inch	1.06 square inches ¼ square inch ¾ square inch

TABLE III.—QUALITY REQUIREMENTS FOR CANNED TOMATOES AND STEWED TOMATOES [1]

WHOLE STYLE

Factor	Grade A	Grade B	Grade C
Average drained weight	See Table I	See Table I	See Table I.
Character: (by count)	Good character	Reasonably good character	Fairly good character.
Score	18-20 points	16-17 points [2]	14-15 points.[3]
Color: (by surface area)	At least 90% USDA Tomato Red, but not more than 5% less red than Minimum Red for Canned Tomatoes or yellow, and none may be vivid green.	At least 50% USDA Tomato Red but not more than 10% less red than Minimum Red for Canned Tomatoes or yellow, and none may be vivid green.	Meets FDA requirements for strength and redness of color [21 CFR 155.190(b)].
Score	27-30 points	24-26 points [2]	21-23 points.[3]
Wholeness	80% by weight whole or almost whole.	70% by weight whole or almost whole.	Less than 70% whole or almost whole.
Score	18-20 points	16-17 points [4]	14-15 points.[3]
Flavor	Normal	Normal	Normal.
Defects:			
Core material	Trace	Slight	Moderate.
EVM	Trace	Slight	Moderate.
Peel	See Table II	See Table II	See Table II.
Blemished areas	See Table II	See Table II	See Table II.
Discolored portions	See Table II	See Table II	See Table II.
Score	27-30 points	24-26 points [2]	21-23 points.[3]
Total score	90-100 points	80-89 points	70-79 points.

[1] Stewed tomatoes are graded excluding other vegetable ingredients.
[2] Cannot be graded above U.S. Grade B, regardless of the total score.
[3] Cannot be graded above U.S. Grade C, regardless of the total score.
[4] Can be graded U.S. Grade A, if the total score requirement is met.

TABLE IV.—QUALITY REQUIREMENTS FOR CANNED TOMATOES AND STEWED TOMATOES [1]

HALVES AND WEDGES STYLES

Factor	Grade A	Grade B	Grade C
Average drained weight	See Table I	See Table I	See Table I.
Character: (by count)	Good character	Reasonably good character	Fairly good character.
Score	18-20 points	16-17 points [2]	14-15 points.[3]
Color: (by surface area)	At least 90% USDA Tomato Red, but not more than 5% less red than Minimum Red for Canned Tomatoes or yellow, and none may be vivid green.	At least 50% USDA Tomato Red but not more than 10% less red than Minimum Red for Canned Tomatoes or yellow, and none may be vivid green.	Meets FDA requirements for strength and redness of color [21 CFR 155.190(b)].
Score	27-30 points	24-26 points [2]	21-23 points.[3]
Flavor	Normal	Normal	Normal.
Defects:			
Core material	Trace	Slight	Moderate.
EVM	Trace	Slight	Moderate.
Peel	See Table II	See Table II	See Table II.
Blemished areas	See Table II	See Table II	See Table II.
Discolored portions	See Table II	See Table II	See Table II.
Score	27-30 points	24-26 points [2]	21-23 points.[3]
Total score [4]	90-100 points	80-89 points	70-79 points.

[1] Stewed tomatoes are graded excluding other vegetable ingredients.
[2] Cannot be graded above U.S. Grade B, regardless of the total score.

[3] Cannot be graded above U.S. Garde C, regardless of the total score.
[4] For "Halves" and "Wedges" styles, the final total score is adjusted by dividing the total score by 80 then multiplying by 100 to allow for the absence of the factor of wholeness.

TABLE V—QUALITY REQUIREMENTS FOR CANNED TOMATOES AND STEWED TOMATOES [1]

SLICED AND DICED STYLES

Factor	Grade A	Grade B	Grade C
Average drained weight	See Table I	See Table I	See Table I.
Character	Good character	Reasonably good Character	Fairly good character.
Sliced: by count			
Diced: by weight			
Score	18–20 points	16–17 points [2]	14–15 points.[3]
Color: (by surface area)	At least 90% USDA Tomato Red, but not more than 5% less red than Minimum Red for Canned Tomatoes or yellow, and none may be vivid green.	At least 50% USDA Tomato Red but not more than 10% less red than Minimum Red for Canned Tomatoes or yellow, and none may be vivid green.	Meets FDA requirements for strength and redness of color [21 CFR 155.190(b)].
Score	27-30 points	24-26 points [2]	21-23 points.[3]
Flavor	Normal	Normal	Normal.
Defects:			
Core material	Trace	Slight	Moderate.
EVM	Trace	Slight	Moderate.
Peel	See Table II	See Table II	See Table II.
Blemished areas	See Table II	See Table II	See Table II.
Discolored portions	See Table II	See Table II	See Table II.
Score	27-30 points	24-26 points [2]	21-23 points.[3]
Total score [4]	90-100 points	80-89 points	70-79 points.

[1] Stewed tomatoes are graded excluding other vegetable ingredients.
[2] Cannot be graded above U.S. Grade B, regardless of the total score.
[3] Cannot be graded above U.S. Grade C, regardless of the total score.
[4] For "Sliced" and "Diced" styles, the final total score is adjusted by dividing the total score by 80 then multiplying by 100 to allow for the absence of the factor of wholeness.

[55 FR 9413, Mar. 14, 1990; 55 FR 12990, April 6, 1990]

§ 52.5171 Determining the grade of a lot.

The grade of a lot of canned tomatoes covered by these standards is determined by the procedures found in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

Subpart—United States Standards for Grades of Concentrated Tomato Juice

SOURCE: 25 FR 6669, July 15, 1960, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION AND GRADES

§ 52.5201 Product description.

"Concentrated tomato juice" means the product prepared from clean, sound, whole tomatoes of the red or reddish varieties as such product is defined in the Standard of Identity for Tomato Puree (21 CFR 155.192; 34 FR 18420) issued pursuant to the Federal Food, Drug, and Cosmetic Act. The product contains not less than 20 percent but less than 24 percent of natural tomato soluble solids. When packed in hermetically sealed containers, it is sufficiently processed by heat, before or after sealing, to assure preservation of the product.

[35 FR 3652, Feb. 25, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5202 Grades of concentrated tomato juice.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of concentrated tomato juice that, when properly reconstituted, (1) has a good color; (2) has a good consistency; (3) is practically free from defects; (4) has a good flavor; and (5) scores not less than 85 points when scored in accordance with the scoring system outlined in this subpart: *Provided,* That the reconstituted tomato juice may have only a fairly good color, scoring not less than 25 points and a fairly good consistency, if the total score is not less than 85 points.

(b) "U.S. Grade C" (or "U.S. Standard") is the quality of concentrated tomato juice that, when properly reconstituted, (1) has a fairly good color; (2) has a fairly good consistency; (3) is fairly free from defects; (4) has a fairly good flavor; and (5) scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of concentrated tomato juice that fails to meet the requirements of U.S. Grade C.

FILL OF CONTAINER

§ 52.5203 Recommended fill of container.

Fill of container is not incorporated in the grades of the finished product, since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container of concentrated tomato juice be filled as full as practicable without impairment of quality, and that the product occupy not less than 90 percent of the capacity of the container.

FACTORS OF QUALITY

§ 52.5204 Ascertaining the grade of a sample unit.

In addition to considering other requirements outlined in the standards, the quality factors of color, consistency, defects, and flavor are evaluated by applying appropriate criteria to the reconstituted tomato juice prepared by thoroughly mixing the concentrated tomato juice with three volumes of water. The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given for each such factor is:

Factors	Points
Color	30
Consistency	15
Defects	15
Flavor	40
Total score	100

§ 52.5205 Color.

(a) *General.* (1) The amount of red in the reconstituted tomato juice is determined by comparing the color of the product with that produced by spinning a combination of the following Munsell color discs:

Disc 1—Red (5R 2.6/13) (glossy finish).

Disc 2—Yellow (2.5 YR 5/12) (glossy finish).

Disc 3—Black (N1) (glossy finish).

Disc 4—Grey (N4) (mat finish).

(2) Such comparison is to be made under a diffused light source of approximately 250 foot-candle intensity and having a spectral quality approximating that of daylight under a moderately overcast sky, and a color temperature of 7500 degrees Kelvin ±200 degrees. With the light source directly over the disc and product, observation is made at an angle of 45 degrees from a distance of about 24 inches from the product.

(b) (*A*) *classification.* Concentrated tomato juice that, when reconstituted properly, has a good color may be given a score of 26 to 30 points. "Good color" means a color that is typical of canned tomato juice, made from well ripened red tomatoes, which has been properly prepared and properly processed. Such color contains as much red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations: 65 percent of the area of Disc 1; 21 percent of the area of Disc 2; 14 percent of the area of Disc 3 or of Disc 4, or 7 percent of the area of Disc 3 and 7 percent of the area of Disc 4, whichever most nearly matches the reflectance of the product.

(c) (*C*) *classification.* If the reconstituted tomato juice has a fairly good color a score of 23 to 25 points may be given. Concentrated tomato juice that scores 23 or 24 points for color shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a partial limiting rule). "Fairly good color" means a color that is typical of canned tomato juice. To score 25 points for color the reconstituted juice shall contain as much red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations: 59 percent of the area of Disc 1; 24½ percent of the area of Disc 2; 16½ percent of the area of either Disc 3 or Disc 4, or 8¼ percent of the area of Disc 3 and 8¼ percent of the area of Disc 4, whichever most nearly matches the reflectance of the product. To score 23 or 24 points for color the reconstituted tomato juice shall contain as much red as, or more red than, that produced by spinning the specified Munsell color discs in the following combinations: 53 percent of the area of Disc 1; 28 percent of the area of Disc 2; 19 percent of the area of either Disc 3 or Disc 4, or 9½ percent of the area of Disc 3 and 9½ percent of the area of Disc 4, whichever most nearly matches the reflectance of the product.

(d) (*SStd.*) *classification.* Concentrated tomato juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 22 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5206 Consistency.

(a) *General.* This factor has reference to the viscosity of the reconstituted juice. The tendency of the insoluble solids to separate, leaving practically clear liquid at the top is also to be noted in this connection.

(b) (*A*) *classification.* Concentrated tomato juice that, when properly reconstituted, has a good consistency may be given a score of 13 to 15 points. "Good consistency" means that the reconstituted tomato juice flows readily; has a normal amount of insoluble tomato solids in suspension; and that there is little tendency for such solids to settle out.

(c) (*C*) *classification.* If the concentrated tomato juice has a fairly good consistency a score of 10 to 12 points may be given. "Fairly good consistency" means that the reconstituted tomato juice flows readily; has a normal amount of insoluble tomato solids in suspension; and that there is not a marked tendency for such solids to settle out.

(d) (*SStd.*) *classification.* Concentrated tomato juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 9 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5207 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from defects, such as dark specks or scale-like particles, seeds, particles of seed, tomato peel, core material or other similar substances.

(b) (*A*) *classification.* Concentrated tomato juice that is practically free from defects may be given a score of 13 to 15 points. "Practically free from defects" means that any defects present in the reconstituted juice do not more than slightly affect the appearance or drinking quality of the juice.

(c) (*C*) *classification.* If the concentrated tomato juice is fairly free from defects a score of 10 to 12 points may be given. Concentrated tomato juice that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" means that any defects present in the reconstituted juice may be noticeable, but are not so large, so numerous or of such contrasting color as to seriously affect the appearance or drinking quality of the juice.

(d) (*SStd.*) *classification.* Concentrated tomato juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 9 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5208 Flavor.

(a) (*A*) *classification.* Concentrated tomato juice that possesses a good flavor may be given a score of 33 to 40 points. "Good flavor" means a distinct canned tomato juice flavor and odor characteristic of good quality tomatoes. To score in this classification the flavor of the reconstituted juice shall not be adversely affected by stems, leaves, crushed seeds, cores, immature tomatoes, or the effects of improper trimming or processing.

(b) (*C*) *classification.* If the reconstituted tomato juice possesses only a fairly good flavor a score of 27 to 32 points may be given. Concentrated tomato juice that falls into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means a characteristic canned tomato juice flavor. To score in this classification the flavor of the reconstituted juice may be affected adversely, but not seriously so, by stems, leaves, crushed seeds, cores, immature tomatoes, or the effects of improper trimming or processing.

(c) (*SStd.*) *classification.* Concentrated tomato juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 26 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.5209 Ascertaining the grade of a lot.

The grade of a lot of concentrated tomato juice covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.5210 Score sheet for concentrated tomato juice.

Type of container ....
Container size ....
Label ....
Code ....
Volume (fluid ounces) ....
Vacuum (inches) ....
Natural tomato soluble solids (percent) ....

Factors		Score points	
Color	30	(A)	26-30
		(C)	[1] 23-25
		(SStd)	[2] 0-22
Consistency	15	(A)	13-15
		(C)	10-12
		(SStd)	[2] 0-9
Defects	15	(A)	13-15
		(C)	[2] 10-12
		(SStd)	[2] 0-9
Flavor	40	(A)	33-40
		(C)	[2] 27-32
		(SStd)	[2] 0-26
Total score	100		

Grade ....

[1] Indicates partial limiting rule.
[2] Indicates limiting rule.

[35 FR 3652, Feb. 25, 1970. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

Subpart—United States Standards for Grades of Frozen Speckled Butter (Lima) Beans

SOURCE: 27 FR 5789, June 20, 1962, unless otherwise noted. Redesignated at 42 FR 32514, June 27 1977 and at 46 FR 63203, Dec. 31, 1931.

PRODUCT DESCRIPTION AND GRADES

§ 52.5241 Product description.

(a) "Frozen speckled butter (lima) beans" means the frozen product prepared from the clean, sound, freshly-vined (but not "seed-dry") seed of the speckled butter (lima) bean plant (Phaseolus limensis). The skins of the seed are pigmented and the external colors range from variegated speckling of green, pink, red, and/or lavender to purple. The product is prepared by shelling the pods; by washing, blanching, and properly draining the seed which may have been sorted and blended or otherwise prepared in accordance with good commercial practice; and is frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

(b) Frozen speckled butter (lima) beans, hereinafter referred to as "frozen beans", mean any of the varieties of frozen speckled butter beans or speckled lima beans.

§ 52.5242 Grades of frozen beans.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen beans that possess a good flavor; that possess a good color; that are practically free from defects; that possess a good character; and that score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of frozen beans that possess a normal flavor; that possess a reasonably good color; that are reasonably free from defects; that possess a reasonably good character; and that score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen beans that fail to meet the requirements of U.S. Grade B.

FACTORS OF QUALITY

§ 52.5243 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards, the following quality factors are evaluated in ascertaining the grade of the product:

(1) *Factor not rated by score points*—

(i) *Flavor.* (*a*) "Good flavor" means that the product—before and after cooking—has a good characteristic flavor and odor and is free from objectionable flavors and objectionable odors of any kind.

(*b*) "Normal flavor" means that the product may be slightly lacking in good flavor but is free from objectionable flavors and objectionable odors of any kind.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors	Points
Color	30
Defects	40
Character	30
Total score	100

(b) *Evaluation of quality.* The scores for the factors of color and absence of defects are determined immediately after thawing to the extent that the product is substantially free from ice crystals and the beans can be handled as individual units. The evaluation of the factor of character is made after the product is cooked (see § 52.5248).

§ 52.5244 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.5245 Color.

(a) *General.* The evaluation of color is determined on the thawed product. The color is based upon the exterior skin and cotyledon color of the beans.

(b) *Color characteristics.* "Similar color characteristics" means the beans are of the speckled type. Very young succulent beans that contain only slight speckling of the skins or a mixture of various speckled varieties are considered as beans with "similar color characteristics."

(c) *(A) classification.* Frozen beans that possess a good color may be given a score of 27 to 30 points. "Good color" means that:

(1) The over-all color is bright and typical for speckled types of similar color characteristics;

(2) Not less than 15 percent, by weight, of the beans possess at least a slight tinge of green in the cotyledons;

(3) Not more than 20 percent, by weight, of the beans may possess a light tan to tan color;

(4) There may be present no more than 4 beans per 10 ounces that are light brown to brown or a pronounced mottled brown; and

(5) The presence of abnormally colored beans does not materially affect the over-all color.

(d) (*B*) *classification.* If the frozen beans possess a reasonably good color, a score of 24 to 26 points may be given. Frozen beans that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that:

(1) The over-all color may be slightly dull or the beans may possess a light tan to tan color but such colors are typical of speckled types of similar color characteristics;

(2) There may be present no more than 8 beans per 10 ounces that are light brown to brown or a pronounced mottled brown; and

(3) The presence of abnormally colored beans does not seriously affect the over-all color.

(e) (*SStd*) *classification.* Frozen beans that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5246 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, from pieces of beans, shriveled beans, sprouted beans, from beans that are blemished or seriously blemished, and from other defects that affect the appearance or edibility of the product.

(b) *Definitions of harmless extraneous vegetable material.* "Harmless extraneous vegetable materials" for the purposes of ascertaining allowances in this section are grouped as:

(1) Flat type—predominantly flat green, tender vegetable material, such as but not limited to pieces of pods or leaves of the bean plant or similar plant; or

(2) Spherical type—predominantly spherical or elliptical-shape vegetable material, such as but not limited to seeds from plants other than the lima bean plant; or

(3) Cylindrical type—predominantly cylindrical green, vegetable material, such as but not limited to stems or pieces of stems of the bean plant or similar plant.

(c) *Basis of allowances for harmless extraneous vegetable material.* The allowances for harmless extraneous vegetable material are based on 30 ounces of frozen beans. When considering sample units of less than 30 ounces, the allowances provided in this section for the respective grade classification will be permitted in a single sample unit: *Provided,* That the average of such defects in the entire sample does not exceed such allowances.

(d) *Definitions of other defects.* (1) A "Piece of bean" means:

(i) A bean from which one-half or more of one cotyledon (or the equivalent thereof) has become detached; or

(ii) Two detached whole cotyledons; or

(iii) Pieces of detached broken cotyledons aggregating the equivalent of one average size whole cotyledon; or

(iv) A whole detached skin or portions of detached skin aggregating the equivalent of an average size whole skin.

(2) "Shriveled bean" means a bean that is materially wrinkled and not of normal plumpness.

(3) "Sprouted bean" means a bean that shows an external shoot protruding prominently beyond the cotyledon or skin.

(4) "Blemished" means blemished to the extent that the appearance or eating quality of the bean is materially affected.

(5) "Seriously blemished" means blemished or discolored to such an extent that the appearance or eating quality of the bean is seriously affected.

(e) (*A*) *classification.* Frozen beans that are practically free from defects may be given a score of 36 to 40 points. "Practically free from defects" means that:

(1) There may be present no more than the specified defects in Table I of this subpart for the Grade A classification; and

(2) Notwithstanding the allowances for such specific defects the presence of harmless extraneous vegetable material, pieces of beans, shriveled and sprouted beans, and blemished and seriously blemished beans, or any other defects or defective units not specifically mentioned, individually or collectively, does not materially affect the appearance or eating quality of the product.

(f) (*B*) *classification.* (1) If the frozen beans are reasonably free from defects, a score of 32 to 35 points may be given. Frozen beans that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(2) "Reasonably free from defects" means that:

(i) There may be present no more than the specified defects in Table I of this subpart for the Grade B classification; and

(ii) Notwithstanding the allowances for such specific defects the presence of harmless extraneous vegetable material, pieces of beans, shriveled and sprouted beans, and blemished and seriously blemished beans, or any other defects or defective units not specifically mentioned, individually or collectively, does not seriously affect the appearance or eating quality of the product.

(g) (*SStd.*) *classification.* Frozen beans that fail to meet the requirements of paragraph (f) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—MAXIMUM ALLOWANCES FOR DEFECTS

Kind of defect—groups of harmless extraneous vegetable material	For each 30 ounces net weight, or average [1]		
	Grade A	Grade B	
		When present as a single group	Combination of any two groups
Flat material	¼ square inch or 1 piece of any size	1 square inch or 1 piece of any size	½ square inch or 1 piece of any size
	or	or	
Spherical material	1 unit	3 units	2 units
	or	or	
Cylindrical material	1 piece (or pieces) not over ½ inch aggregate length.	1 piece (or pieces) not over 2 inches aggregate length.	1 piece (or pieces) not over 1 inch aggregate length.

	Count per 10 ounces net weight	
Pieces of beans	20 pieces	40 pieces.
Shriveled beans; and sprouted beans.	2 beans	8 beans.
Blemished beans; and seriously blemished beans.	Total 10 beans, but no more than 5 seriously blemished of which no more than 1 may be accompanied by material discoloration.	Total 20 beans, but no more than 10 seriously blemished of which no more than 2 may be accompanied by material discoloration.

[1] See § 52.5246(c) *Basis of allowences for harmless extraneous vegetable material.*

§ 52.5247 Character.

(a) *General.* The evaluation of character is based on the degree of tenderness of the skins and cotyledons and the uniformity of such tenderness and texture after cooking the product by the prescribed cooking procedure (See § 52.5248).

(b) (*A*) *classification.* Frozen beans that possess a good character may be given a score of 27 to 30 points. "Good character" means the beans are reasonably tender and are practically uniform in texture and tenderness.

(c) (*B*) *classification.* If the frozen beans possess a reasonably good character, a score of 24 to 26 points may be given. Frozen beans that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means the beans are fairly tender and may be variable in texture and tenderness, and the cotyledons may be "mealy" but are not hard.

(d) *(SStd) classification.* Frozen beans that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

METHODS OF ANALYSES

§ 52.5248 Cooking procedure.

(a) The cooking procedure that follows is not intended to be a recipe for purposes of food preparation but is for the purposes of ascertaining compliance with requirements for applicable quality factors as outlined in this subpart.

(b) Place 10 ounces of the thawed or free-flowing product in a two-quart sauce pan containing 400 milliliters of tap water (without the addition of salt) which has been brought to a boil. Continue to heat rapidly until the water begins to boil again. Cover the pan and boil for 40 minutes, reducing the heat to maintain a constant boil, except that very young succulent beans may be cooked for a lesser length of time.

(c) Immediately after cooking pour the product on to a flat receptacle and spread out to facilitate cooling. The product should be checked for flavor, odor, tenderness, and texture while still warm.

LOT INSPECTION AND CERTIFICATION

§ 52.5249 Ascertaining the grade of a lot.

The grade of a lot of frozen beans covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.5250 Score sheet for frozen speckled butter (lima) beans.

Size and kind of container ....
Container marks or identification ....
Label ....
Net weight (ounces) ....

Factors		Score points	
Color	30	(A)	27–30
		(B)	[1] 24–26
		(SStd.)	[1] 0–23
Defects	40	(A)	36–40
		(B)	[1] 32–35
		(SStd.)	[1] 0–31
Character	30	(A)	27–30
		(B)	[1] 24–26
		(SStd.)	[1] 0–23
Total score	100		

Grade ....
Flavor ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Melon Balls

SOURCE: 27 FR 4872, May 24, 1962, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, AND GRADES

§ 52.5361 Product description.

Melon balls are spheres of melon flesh prepared from suitable varieties of sound, fresh Cantaloupe (Cucumis melo) melons and/or sound, fresh Honey Dew (inodorus) melons to which melon balls prepared from sound, fresh melons of a definitely different but suitable variety may be added. The balls are prepared and washed in a manner to assure a clean and wholesome product. They are properly drained before filling into containers; may include a suitable fruit and/or vegetable garnish; may be packed with the addition of nutritive or nonnutritive sweetening ingredient(s) including sirup and any other ingredient permissible under the provisions of the Federal Food, Drug, and Cosmetic Act; and are prepared and frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.5362 Types of frozen melon balls.

(a) *Cantaloupe.* Cantaloupe type consists entirely of frozen melon balls derived from Cantaloupe melons.

(b) *Honey Dew.* Honey Dew type consists entirely of frozen melon balls derived from Honey Dew melons.

(c) *Mixed—Cantaloupe and Honey Dew.* This type consists of not less than 50 percent, by weight, of units derived from Cantaloupe melons and not less than 33⅓ percent, by weight, of units derived from Honey Dew melons.

(d) *Mixed—Honey Dew and Cantaloupe.* This type consists of not less than 50 percent, by weight, of units derived from Honey Dew melons and not than 33⅓ percent, by weight, of units derived from Cantaloupe melons.

(e) *Other types.* Other types refer to:

(1) Melon balls derived from a single variety of melon or mixture of melon types other than Cantaloupe or Honey Dew; or

(2) Melon balls of any single type, or any mixture, of Cantaloupe or Honey Dew to which has been added melon balls of a different suitable variety of melon; or

(3) Any mixture of Cantaloupe or Honey Dew melon balls that do not meet the respective requirements of paragraph (c) or (d) of this section.

§ 52.5363 Grades for frozen melon balls.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen melon balls that:

(1) Possess a good flavor and odor;

(2) Have good color;

(3) Are practically uniform in size and shape;

(4) Are practically free from defects;

(5) Have good character; and

(6) Score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of frozen melon balls that:

(1) Possess a reasonably good flavor and odor;

(2) Have reasonably good color;

(3) Are reasonably uniform in size and shape;

(4) Are reasonably free from defects;

(5) Have reasonably good character; and

(6) Score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen melon balls that fails the requirements of "U.S. Grade B."

FACTORS OF QUALITY

§ 52.5364 Ascertaining the grade of a sample unit.

(a) *General.* In addition to other requirements outlined in this standard, the following quality factors are evaluated:

(1) *Factors not rated by score points.*

(i) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	20
Uniformity of size and shape	30
Absence of defects	30
Character	20
Total score	100

(b) *When ascertained.* The grade of frozen melon balls is determined immediately after thawing to the extent that the units are substantially free of ice crystals.

(c) *Categories of flavor and odor.* (1) "Good flavor and odor" is the pleasant flavor and odor normally expected of well-ripened melon units of the variety or varieties used. Flavor and odor of any garnish used shall be normal.

(2) "Reasonably good flavor and odor" is the flavor and odor normally expected of reasonably well-ripened units of the variety or varieties used. This flavor and odor may be slightly "flat," but is free from objectionable flavors or objectionable odors of any kind. Flavor and odor of any garnish used shall be normal.

§ 52.5365 Ascertaining the rating for the factors which are scored.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical ranges within each factor are inclusive. (For example, "18 to 20 points" means 18, 19, or 20 points.)

§ 52.5366 Color.

(a) (*A*) *classification.* Frozen melon balls of any type that possess good color may be given a score of 18 to 20 points. "Good color" means that any included garnish shall have a uniform and bright color that is typical for the garnish and that does not detract from the overall appearance of the melon units; and that the melon balls:

(1) Have a bright over-all appearance;

(2) Possess a reasonably uniform color which is typical for well-ripened melons of the variety or varieties used;

(3) May have present not more than 10 percent, by count, of units which may have a reasonably bright appearance or may possess color which is typical for reasonably well-ripened melon flesh;

(4) Are free from exceptionally pale Cantaloupe units, dark green Honey Dew units, and units that otherwise fail "reasonably good color."

(b) (*B*) *classification.* Frozen melon balls of any type that possess reasonably good color may be given a score of 16 or 17 points. Frozen melon balls that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means that any included garnish has a reasonably uniform and reasonably bright color that is typical for the garnish and that does not materially detract from the overall appearance of the melon units; and that the melon balls:

(1) Have a reasonable bright over-all appearance;

(2) Possess color which is typical for reasonably well-ripened melon flesh;

(3) May have present not more than 10 percent, by count, of units which may lack a reasonably bright appearance or may possess color which is not typical of well-ripened or reasonably well-ripened melon flesh;

(4) In the case of "Cantaloupe type," not more than 10 percent, by count, of units may be exceptionally pale;

(5) In the case of "Honey Dew type," not more than 10 percent, by count, of units may be dark green; and

(6) In the case of either "Mixed-Cantaloupe and Honey Dew" or "Mixed-Honey Dew and Cantaloupe" types, not more than a total of 10 percent, by count, of all units may be exceptionally pale Cantaloupe units and/or dark green Honey Dew units.

(c) (*SStd*) *classification.* Frozen melon balls that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5367 Uniformity of size and shape.

(a) *Definitions of terms.* (1) A "spherical unit" in frozen melon balls means a unit which has the appearance of three-fourths or more of a sphere.

(2) An "almost spherical unit" in frozen melon balls means a unit which has the appearance of more than one-half of a sphere but less than three-fourths of a sphere.

(3) A "misshapen unit" in frozen melon balls means a unit which appears to be one-half of a sphere or less or is otherwise materially misshapen.

(b) (*A*) *classification.* Frozen melon balls that are practically uniform in size and shape may be given a score of 27 to 30 points. "Practically uniform in size and shape" means that:

(1) The percentages, by count, of "almost spherical units" and "misshapen units" do not exceed the allowances for (A) classification in Table I of this subpart; and

(2) Notwithstanding the applicable allowances in Table I, the "almost spherical units" or "misshapen units," either individually or collectively, do not materially affect the appearance of the product.

(c) (*B*) *classification.* Frozen melon balls that are reasonably uniform in size and shape may be given a score of

24 to 26 points. Frozen melon balls that fall into this classification shall not be graded above U.S. Grade B (this is a limiting rule). "Reasonably uniform in size and shape" means that:

(1) The percentages, by count, of "almost spherical units" and "misshapen units" do not exceed the allowances for (B) classification in Table I of this subpart; and

(2) Notwithstanding the applicable allowances in Table I the "almost spherical units" or "misshapen units," either individually or collectively, do not seriously affect the appearance of the product.

(d) (*SStd.*) *classification.* Frozen melon balls that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—ALLOWANCES FOR UNIFORMITY OF SIZE AND SHAPE IN FROZEN MELON BALL

	(A) Classification	(B) Classification
Spherical units.	80% or more (by count).	60% or more (by count).
Almost spherical units and misshapen units.	Total—20% or less (by count) but no more than—.	Total—40% or less (by count) but no more than—
Misshapen units.	3% (by count)	20% (by count).

§ 52.5368 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from exterior rind, interior rind, melon seeds, membrane material, and from any other defects which detract from the appearance or edibility of the product.

(b) *Definitions of terms and defects.*

(1) The "area" of a rind spot is that which is equivalent to the area of a circle of the diameter stated or defined in this section.

(2) A "minor rind spot" on a Cantaloupe unit is an area of light green interior melon rind which measures 5/16 inch or less in diameter or is an area of dark green interior melon rind which measures ⅛ inch or less in diameter.

(3) A "minor rind spot" on a Honey Dew unit or on a unit of other melon types is an area of interior melon rind which measures 5/16 inch or less in diameter.

(4) A "major rind spot" on a Cantaloupe unit is an area of light green interior melon rind exceeding 5/16 inch in diameter or is an area of dark green interior melon rind exceeding ⅛ inch in diameter.

(5) A "major rind spot" on a Honey Dew unit or on a unit of other melon types is an area of interior melon rind exceeding 5/16 inch in diameter.

(6) A "serious rind spot" is a spot of rind on a melon ball unit, part or all of which is exterior rind.

(7) "Seeds" are melon seeds which may be attached to a melon ball unit or may be loose.

(8) "Membrane material" is material other than seeds which makes up the placenta of a melon.

(c) (*A*) *classification.* Frozen melon balls that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means there may be present:

(1) Not more than 20 percent, by count, of units with rind spots: *Provided,* That not more than 5 percent, by count, may be major rind spots and that not more than 2½ percent, by count, may be serious rind spots. (One unit in a container is permitted to possess a minor rind spot, major rind spot, or serious rind spot if such unit exceeds the allowable percentage: *Provided,* That in all sample units comprising the sample such units do not, on the average, exceed the allowable percentage);

(2) Not more than an average of one seed per 16 ounces net weight: *Provided,* That no individual container may contain more than one seed per 4 ounces net weight or fraction thereof; and

(3) No membrane material or other defects which detract more than slightly from the appearance of the product.

(d) (*B*) *classification.* Frozen melon balls that are reasonably free from defects may be given a score of 24 to 26 points. Frozen melon balls that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that there may be present:

(1) Not more than 40 percent, by count, of units with rind spots: *Provided*, That not more than 10 percent, by count, may be major rind spots and that not more than 5 percent, by count, may be serious rind spots (One unit in a container is permitted to possess a minor rind spot, major rind spot, or serious rind spot if such unit exceeds the allowable percentage: *Provided*, That in all sample units comprising the sample such units do not, on the average, exceed the allowable percentage).

(2) Not more than an average of two seeds per 16 ounces net weight: *Provided*, That no individual container may contain more than one seed per two ounces net weight or fraction thereof; and

(3) No membrane material or other defects which materially detract from the appearance of the product.

(e) (*SStd.*) *classification*. Frozen melon balls that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 23 points and shall not be graded above "Substandard," regardless of the total score of the product (this is a limiting rule).

§ 52.5369 Character.

(a) *General*. The factor of character refers to the degree of ripeness, the texture, and tenderness of the melon ball units.

(b) (*A*) *classification*. Frozen melon balls that have good character may be given a score of 18 to 20 points. "Good character" means that the melon ball units:

(1) Possess a tender texture typical of mature, well-ripened, properly prepared, and properly processed melon units; and

(2) Consist of not more than 10 percent, by count, of units which are excessively soft, mushy, excessively frayed, fibrous, tough, or rubbery: *Provided*, That not more than 5 percent, by count, are tough or rubbery (One unit in a container is permitted to be excessively soft, mushy, excessively frayed, fibrous, tough, or rubbery if such unit exceeds the allowable percentage: *Provided*, That in all sample units comprising the sample such units of fruit do not, on the average, exceed the allowable percentages).

(c) (*B*) *classification*. Frozen melon balls that have reasonably good character may be given a score of 16 or 17 points. Frozen melon balls that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good character" means that the melon ball units:

(1) Possess a reasonably tender texture typical of reasonably mature, reasonably well-ripened, properly prepared, and properly processed melon units; and

(2) Consist of not more than 20 percent, by count, of units which are excessively soft, mushy, excessively frayed, fibrous, tough, or rubbery: *Provided*, That not more than 10 percent, by count, are tough or rubbery (One unit in a container is permitted to be excessively soft, mushy, excessively frayed, fibrous, tough, or rubbery if such unit exceeds the allowable percentage: *Provided*, That in all sample units comprising the sample such units of fruit do not, on the average, exceed the allowable percentages).

(d) (*SStd.*) *classification*. Frozen melon balls that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

LOT INSPECTION AND CERTIFICATION

§ 52.5370 Ascertaining the grade of a lot.

The grade of a lot of frozen melon balls covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.5371 Score sheet for frozen melon balls.

Number, size, and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Type ....
Diameter of units— inch; count— (per) ....

Factors		Score points	
Color	20	(A)	18–20
		(B)	[1]16–17
		(SStd.)	[1]0–15
Uniformity of size and shape.	30	(A)	27–30
		(B)	24–26
		(Sstd.)	[1]0–23
Absence of defects.	30	(A)	27–30
		(B)	[1]24–26
		(SStd.)	[1]0–23
Character	20	(A)	18–20
		(B)	[1]16–17
		(SStd.)	[1]0–15
Total score	100		

Flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Green Olives

SOURCE: 31 FR 14249, Nov. 4, 1966; 31 FR 14875, Nov. 24, 1966, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES, STYLES, AND GRADES

§ 52.5441 Product description.

Green olives are completely fermented and cured fruit of the olive tree (Olea europaea) which have been prepared from a firm fruit of suitable maturity and variety that have been properly treated to partially remove the characteristic bitterness. The cured olives and the brine packing media have a pH of not more than 4.00 and a sodium chloride content of not less than 6.00 percent. Not more than a trace of reducing sugars may be present. Suitable garnishes, spices, seasoning ingredients, or any other ingredient(s) permitted under the Federal Food, Drug, and Cosmetic Act may be added.

§ 52.5442 Types of green olive pack.

(a) "Thrown pack" means green olives packaged without regard to placement or arrangement within the package.

(b) "Placed (or stick) pack" means green olives packaged in such a manner as to indicate that the individual olives have been carefully positioned in a definite pattern.

§ 52.5443 Styles of green olives.

(a) "Whole" or "plain" green olives are those which have not been pitted.

(b) "Pitted" green olives are those from which the pits have been removed.

(c) "Stuffed" green olives are pitted green olives that have (1) pimiento; (2) onion; (3) almond; (4) celery; or (5) any other suitable ingredient stuffed into the pit cavity.

(d) "Halved" green olives are pitted green olives that have been cut lengthwise into two approximately equal parts.

(e) "Sliced" green olives are pitted green olives cut into parallel slices of fairly uniform thickness.

(f) "Chopped" or "Minced" (or "Relish-type") green olives are small random-sized cut pieces or cut bits prepared from pitted green olives.

(g) "Broken pitted" or "Salad pack" green olives are pitted olives—broken or stuffed—that have not been cut or sliced.

[31 FR 14249, Nov. 4, 1966, as amended at 31 FR 15019, Nov. 30, 1966. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5444 Grades of green olives.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of whole, pitted, stuffed, halved, and sliced green olives that: (1) Have similar varietal characteristics; (2) have normal flavor and odor; (3) have good color; (4) are practically uniform in size in whole, pitted, and stuffed styles of single sizes; (5) are practically free of defects; (6) have good character; and (7) score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of whole, pitted, stuffed, halved, sliced, and chopped or minced styles of green olives that: (1) Have similar varietal characteristics; (2) have normal flavor and odor; (3) have reasonably good color; (4) are reasonably uniform in size in whole, pitted, and stuffed styles of single sizes; (5) are reasonably free of defects; (6) have reasonably good character; and (7) score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of whole, pitted, stuffed, halved, sliced, chopped, or minced, and broken pitted styles of green olives that: (1) Have similar varietal characteristics; (2) have normal flavor and odor; (3) have fairly good color; (4) are fairly uniform in size in whole, pitted, and stuffed styles of single sizes; (5) are fairly free of defects; (6) have fairly good character; and (7) score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of any style of green olives that fails to meet the applicable requirements of U.S. Grade C.

SIZE DESIGNATIONS

§ 52.5445 Sizes of whole style green olives.

(a) *General.* (1) The count for green olives is calculated on the basis of the drained weight of the olives from all sample units comprising the sample.

(2) The "counts per pound" in Table I are expressed as a range in count from the minimum to maximum number for a stated size. Where a single approximate count per pound is stated, it is an additional expression representing the approximate midpoint within the count range.

(3) The "approximate counts per kilo" in Table I are alternative or supplemental expressions to "counts per pound" but are not exact equivalents. Where two or more count ranges are stated for an illustrated size, any of such count ranges may be used to describe the size illustrated.

(b) *Determining compliance*—(1) *Single size.* Green olives shall be considered of a single size designation if the olives:

(i) Are at least fairly uniform in size as defined in § 52.5452(d); and

(ii) Approximate the size illustrated in Table I; and

(iii) Are within the count range for such size.

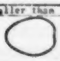
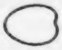
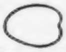
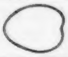
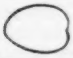
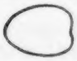
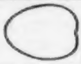
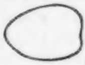
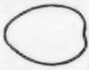
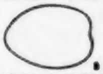
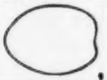
(2) *Mixed sizes.* Green olives shall be considered "Mixed sizes" when the olives are not classifiable as a single size.

§ 52.5446 Size of pitted and stuffed styles of green olives.

The size designation for pitted and stuffed styles of green olives shall be that of the single size or a blend of sizes which conforms most closely to the size or sizes illustrated in Table I.

TABLE I

SINGLE SIZES

ILLUSTRATION OF SIZES AND NUMERICAL DESIGNATION	SIZE DESIGNATION	COUNTS PER POUND	OTHER SIZE DESIGNATIONS APPROXIMATE COUNTS PER KILO
Smaller than	Sub-Petite	221 or more	more than 420
 00	Sub Petite	Approximate 200 (181 to 220)	400/420
 0	Petite or Midget	Approximate 160 (141 to 180)	380/400 340/360 300/320
 1	Small Select or Standard	Approximate 135 (128 to 140)	280/300
 2	Medium	Approximate 113 (106 to 127)	240/260
 3	Large	Approximate 98 (91 to 105)	200/220
 4	Extra Large	Approximate 82 (76 to 90)	180/200 160/180
 5	Mammoth	Approximate 70 (65 to 75)	150/160 140/150
 6	Giant	53 to 64	130/140 120/130
 7	Jumbo	42 to 52	110/120 100/110 90/100
 8	Colossal	33 to 41	80/90 70/80
 9	Super Colossal	32 or less	60/70

Illustrations reduced to 48½ percent of original size.

RECOMMENDED MINIMUM DRAINED WEIGHTS

§ 52.5447 Recommended minimum drained weights.

(a) *General.* The minimum drained weight recommendations for the various styles in Table II and Table III are not incorporated in the grade of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(b) *Method for determining drained weight.* The drained weight of green olives is determined by emptying the container contents upon a U.S. Standard No. 8 sieve, of proper diameter, containing 8 meshes to the inch (0.0937 inch, ±3 percent, square openings) so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage, and allowing to drain for 2 minutes. The drained weight is the weight of the sieve and olives minus the weight of the dry sieve. A sieve 8 inches in diameter is used for the equivalent of 1-quart size containers and smaller, and a sieve 12 inches in diameter, for larger containers.

TABLE II—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR GREEN OLIVES (WHOLE, PITTED, AND STUFFED STYLES)

[In ounces]

Container sizes [1]	½ pint		1 pint		1 quart		1 gallon
	Whole	Pitted and stuffed	Whole	Pitted and stuffed	Whole	Pitted and stuffed	Whole
Size designations							
Subpetite; Petite	5½	4	11	9	22	18	88
Small; Select; Standard(s)	5	3¾	10	8	21	17	88
Medium	5	3¾	10	8	21	17	88
Large	5	4	10	8½	21	18	86
Extra Large	5	4	10	8½	21	18	86
Mammoth	4¾	4	10	8½	21	18	86
Giant	4½	3¾	9½	8	20½	17	88
Jumbo	4½	3¾	9½	8	20½	17	88

TABLE II—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR GREEN OLIVES (WHOLE, PITTED, AND STUFFED STYLES)—Continued

[In ounces]

Container sizes [1]	½ pint		1 pint		1 quart		1 gallon
	Whole	Pitted and stuffed	Whole	Pitted and stuffed	Whole	Pitted and stuffed	Whole
Colossal	4½	3¾	9½	8	20½	17	88
Super Colossal	4½	3½	9	7½	19	16½	88
Mixed Sizes	5	4	10	8½	21	18	86

[1] Recommended minimum drained weight for other container sizes are proportionate to the 1 quart recommendations for the applicable size and style.

TABLE III—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR GREEN OLIVES (HALVED, CHOPPED OR MINCED, SLICED, AND BROKEN PITTED STYLES)

[In ounces]

Container sizes [2]	4.4	1 pint	1 quart	1 gallon
Halved	2¼	7½	15	72
Chopped or minced	4½	15½	31	122
Sliced	2¼	7½	15	72
Broken pitted		7½	15	72

[2] Recommended minimum drained weights for other container sizes are proportionate to the 1 quart recommendations for the applicable style.

§ 52.5448 Compliance with recommended minimum drained weights.

Compliance with the recommended minimum drained weights for green olives is determined by averaging the drained weights from all the containers which are representative of a specific lot and such lot is considered as meeting the recommendations if the following criteria are met:

(a) The average of the drained weights from all of the containers meets the recommended minimum drained weight; and

(b) The drained weights from the containers which do not meet the minimum recommended drained weight are within the range of variability for good commercial practice.

FACTORS OF QUALITY

§ 52.5449 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standards the following quality factors are evaluated:

(1) *Factor not rated by score points.*

(i) Flavor and order.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each factor are:

(i) Color	20
(ii) Uniformity of size	20
(iii) Absence of defects	30
(iv) Character	30
Total score	100

§ 52.5450 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.5451 Color.

(a) *General.* The evaluation of color shall be determined immediately after the container has been opened and, as applicable for the style, is based upon the exterior color, the interior flesh color, and general appearance. The exterior color of "halved" style is determined on the uncut surfaces.

(b) (*A*) *Classification.* Green olives that have good color may be given a score of 18 to 20 points. "Good color" has the following meaning for the applicable styles:

(1) *Whole; pitted; stuffed; halved.* The olives have a practically uniform bright yellow-green to green exterior color that is characteristic of the variety, a light colored flesh, and not more than 5 percent, by count, of the olives or units thereof may vary from such color that is typical of the variety from which prepared: *Provided,* That in stuffed style or when garnish is added the stuffing or garnish shall have a good characteristic color typical of the product used.

(2) *Sliced.* The general color of the olives is normal and typical of these styles prepared from olives having at least reasonably good color and when garnish is added the garnish shall have a good characteristic color typical of the product used.

(c) (*B*) *Classification.* Green olives that have reasonably good color may be given a score of 16 or 17 points. "Reasonably good color" has the following meaning for the applicable styles:

(1) *Whole; pitted; stuffed; halved.* The olives have a reasonably uniform yellow-green to green exterior color, a light colored flesh, and not more than 10 percent, by count, of the olives or units thereof may vary from such color that is typical of the variety from which prepared: *Provided,* That in stuffed style or when garnish is added the stuffing or garnish shall have a reasonably good characteristic color typical of the product used.

(2) *Sliced; chopped or minced.* The general color of the olives is normal and typical of the styles prepared from olives having at least fairly good color and when garnish is added the garnish shall have a reasonably good characteristic color typical of the product used.

(d) (*C*) *Classification.* Green olives that have fairly good color may be given a score of 14 or 15 points. Green olives that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" has the following meaning for the applicable styles:

(1) *Whole; pitted; stuffed; halved.* The olives have a fairly uniform yellow-green to green exterior color, may have a variable colored flesh, and not more than 20 percent, by count, of the olives or units thereof may vary from such color that is typical of the variety from which prepared: *Provided,* That in stuffed style or when garnish is added the stuffing or garnish shall have a fairly good characteristic color typical of the product used.

(2) *Sliced; chopped or minced.* The general color of the olives is normal and varies more markedly than these styles prepared from olives with fairly good color.

(3) *Broken pitted.* The general color of the olives is normal and may be variable, but is typical of this style prepared from olives with good, reasonably good, or fairly good color.

(e) (*SStd*) *Classification.* Green olives that are extremely dull grey-green, dark, oxidized, or have other abnormal color or that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.5452 Uniformity of size.

(a) *General.* (1) Uniformity of size refers to the variation in diameters of whole, pitted, and stuffed styles. "Diameter" means the shortest measurement at the greatest diameter thickness of the olive when measured at right angles to the pit or pit cavity.

(2) The factor of uniformity of size is not applicable to mixed sizes or to halved, sliced, chopped or minced, and broken pitted styles; and is not scored. For mixed sizes and these styles the sum of the scores for the other factors (color, defects, and character) is multiplied by 10 and divided by 8, dropping any fractions, to determine the total score.

(b) (*A*) *Classification.* Whole, pitted, and stuffed style green olives of a single size that are practically uniform in size may be given a score of 18 to 20 points. "Practically uniform in size" means that of all the olives, the variation in diameters does not exceed ⅛ inch; and in 90 percent, by count, that are most uniform in diameter, the olive with the largest diameter does not exceed the olive with the smallest diameter by more than $^1/_{16}$ inch.

(c) (*B*) *Classification.* Whole, pitted, and stuffed style green olives of a single size that are reasonably uniform in size may be given a score of 16 or 17 points. "Reasonably uniform in size" means that of all the olives, the variation in diameters does not exceed $^3/_{16}$ inch; and in 80 percent, by count, that are most uniform in diameter, the olive with the largest diameter does not exceed the olive with the smallest diameter by more than $^1/_{16}$ inch. Green olives of subpetite size (or olives of whole style that count 181 to 220 per pound) shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product.

(d) (*C*) *Classification.* Whole, pitted, and stuffed style green olives of a single size that are fairly uniform in size may be given a score of 14 or 15 points. Green olives that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly uniform in size" means that of all the olives, in 60 percent, by count, that are most uniform in diameter the olive with the largest diameter does not exceed the olive with the smallest diameter by more than $^1/_{16}$ inch. Olives of whole style that count 221 to 275 per pound shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product.

(e) (*SStd*) *Classification.* Green olives of whole style that have an average count of more than 275 per pound or that otherwise fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

[31 FR 14249, Nov. 4, 1966, as amended at 32 FR 11467, Aug. 9, 1967. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5453 Absence of defects.

(a) *General.* Absence of defects refers to the degree of freedom from harmless extraneous material, pit material, stems and portions thereof, blemishes, wrinkles, mutilated olives, internal gas pockets, and from any other defects which affect the appearance or edibility of the product.

(b) *Definitions of defects*—(1) *Harmless extraneous material.* "Harmless extraneous material" means any vegetable substance that is harmless.

(2) *Pit material.* "Pit material" is classified as follows:

(i) "Pit" means any whole pit in other than whole olives, whether loose or partially attached to the flesh.

(ii) "Piece of pit" means any portion of pit regardless of size in pitted, stuffed, halved, sliced, or broken pitted styles.

(iii) "Fragments of pit" means any portion of pit in chopped or minced style that weighs more than 5 milligrams.

(3) *Stem.* A "stem" or any portion thereof that measures $^3/_{32}$ inch or less from the shoulder of the olive is not considered a defect. Stems are classified as follows:

(i) A "minor stem" is a stem or portion thereof that measures more than $^3/_{32}$ inch, but not more than $^5/_{32}$ inch, from the shoulder of the olive.

(ii) A "major stem" is a stem or portion thereof that measures more than $^5/_{32}$ inch from the shoulder of the olive.

(4) *Blemishes.* "Blemishes" mean dark-colored surface marks which may or may not penetrate into the flesh or internal discoloration. Blemishes are classified as follows:

(i) "Insignificant blemishes" are surface marks which do not penetrate perceptibly into the flesh and which individually or collectively do not more than slightly affect the appearance of the olive or unit.

(ii) "Minor blemishes" are surface marks which do not penetrate perceptibly into the flesh and which individually or collectively materially affect the appearance of the olive or unit.

(iii) "Major blemishes" include:

(*a*) Surface marks or similar injury which may or may not be associated with a soft texture below the skin and which individually or collectively seriously affect the appearance or edibility, or both, of the olive or unit;

(*b*) Surface marks or bruises or similar injury which penetrate perceptibly into the flesh and which individually or collectively seriously affect the appearance or edibility, or both, of the olive or unit; and

(c) Internal discolorations of any type, or intensity, involving any portion of the flesh.

(5) *Wrinkles.* Classification of wrinkles shall be determined while olives are moist and any increase in wrinkling due to dehydration after removing from the container shall not be considered. Wrinkles are classified as follows:

(i) "Insignificant wrinkles" are those which are hairline in appearance and approximate less than 1/64 inch in width and, regardless of area covered, are not considered as defects.

(ii) "Minor wrinkles" are those which approximate 1/64 inch but not more than 1/32 inch in width and cover not more than approximately one-sixth of the area of the olive.

(iii) "Major wrinkles" are: (*a*) Minor wrinkles which cover more than one-sixth of the area on the olive; or (*b*) are wrinkles which are more than 1/32 inch in width and cover more than approximately one-sixth of the area of the olive.

(6) *Mutilated.* A "mutilated" olive in whole, pitted, or stuffed styles means an olive that is so pitter-torn or damaged by other means that the entire pit cavity is exposed or the appearance of the olive is seriously affected to the same degree.

(7) *Internal gas pockets.* Internal gas pockets that exceed 1/8 inch in length.

(c) (*A*) *Classification.* Green olives of whole, pitted, stuffed, halved, and sliced styles that are practically free of defects may be given a score of 27 to 30 points. "Practically free of defects" means that the green olives are practically free of any defects not specifically mentioned and that these defects may no more than slightly affect the appearance or edibility of the olives; that the packing media of stuffed olives is practically free of detached pieces of stuffing; that the overall appearance of the product is not materially affected by olives or units with insignificant blemishes; and, in addition, that the specifically mentioned defects do not exceed the allowances for U.S. Grade A set forth in Tables IV or V, as applicable.

(d) (*B*) *Classification.* (1) Green olives of whole, pitted, stuffed, halved, sliced, and chopped or minced styles that are reasonably free of defects may be given a score of 24 to 26 points. Green olives that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score of the product (this is a limiting rule).

(2) "Reasonably free of defects" means that the green olives are reasonably free of any defects not specifically mentioned and that these defects may more than slightly, but not materially, affect the appearance or edibility of the olives; that the packing media of stuffed olives is reasonably free of detached pieces of stuffing; that the overall appearance of the product may be materially affected by olives or units with insignificant blemishes; and, in addition, that the specifically mentioned defects do not exceed the allowances for U.S. Grade B set forth in Tables IV or V, as applicable.

(e) (*C*) *Classification.* Green olives of whole, pitted, stuffed, halved, sliced, chopped or minced, and broken pitted styles that are fairly free of defects may be given a score of 21 to 23 points. Green olives that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly free of defects" means that the olives are fairly free of any defects not specifically mentioned and that these defects may materially, but not seriously, affect the appearance and edibility of the olives; that the packing media of stuffed olives is fairly free of detached pieces of stuffing; that the overall appearance of the product may be seriously affected by olives or units with insignificant blemishes; and, in addition, that the specifically mentioned defects do not exceed the allowances for U.S. Grade C set forth in Tables IV or V, as applicable.

(f) (*SStd*) *Classification.* Green olives that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE IV—DEFECT ALLOWANCES—GREEN OLIVES FOR WHOLE—PITTED—STUFFED—HALVED STYLES

Defects	U.S. Grade A or U.S. Fancy	U.S. Grade B or U.S. Choice	U.S. Grade C or U.S. Standard
	Maximum (on an average) per 100 whole, pitted, or stuffed olives or per 200 halved olives		
Harmless extraneous material	1 piece	2 pieces	3 pieces
Pit material (pitted, stuffed, and halved styles)	1 pit or piece of pit	2 pits or pieces of pits	3 pits or pieces of pits
Stems: minor and major	Total of 6 but not more than 3 major stems	Total of 10 but not more than 5 major stems	Total of 20 but not more than 10 major stems
Darkened or blemished stuffing material (stuffed style)	5 olives	7 olives	10 olives

	Total and limiting (maximum) percentages by count of olives with defects stated					
	Total	Provided these limits are not exceeded	Total	Provided these limits are not exceeded	Total	Provided these limits are not exceeded
Blemishes: minor and major. Wrinkles: minor and major. Olives with internal gas pockets/mutilated olives	10 percent by count	5 percent major blemishes or major wrinkles (combined) 3 percent with internal gas pockets and/or mutilated	15 percent by count	10 percent major blemishes or major wrinkles (combined) 10 percent with internal gas pockets, 5 percent mutilated	25 percent by count	15 percent major blemishes or major wrinkles (combined) 15 percent with internal gas pockets, 8 percent mutilated

TABLE V—DEFECT ALLOWANCES—GREEN OLIVES FOR SLICED—CHOPPED—BROKEN PITTED STYLES

Defects	Broken pitted style	Sliced style	Sliced, chopped style	Sliced, chopped style
	U.S. Grade C or U.S. Standard—Maximum (per pound of drained olives—average)	U.S. Grade A or U.S. Fancy	U.S. Grade B or U.S. Choice	U.S. Grade C or U.S. Standard
Harmless extraneous material	2 pieces	These or any other defects (including pieces of pits and fragments) do not more than slightly affect the appearance or edibility of the product	These or any other defects (including pieces of pits and fragments) do not materially affect the appearance or edibility of the product	These or any other defects (including pieces of pits and fragments) do not seriously affect the appearance or edibility of the product
Pit material	2 pits or pieces of pit			
Stems: Minor and Major	4 stems			
Olives that are blemished by minor and/or major blemishes	Maximum (by weight of drained olives) 15 percent			

[31 FR 14249, Nov. 4, 1966, as amended at 31 FR 15019, Nov. 30, 1966. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5454 Character.

(a) *General.* Character refers to the firmness, crispness, and texture characteristic for the variety and the condition of the epidermal tissue.

(b) *Definition of term.* (1) "Slip skin" refers to epidermal tissue that has become loosened and/or detached from the underlying flesh of the olive.

(c) (*A*) *Classification.* Green olives of whole, pitted, stuffed, halved, and sliced styles that have good character may be given a score of 27 to 30 points. "Good character" means that the olives have a uniform tender texture that is characteristic of the variety and that is firm, crisp, and fleshy; and that the olives are practically free of slip skins.

(d) (*B*) *Classification.* Green olives of whole, pitted, stuffed, halved, sliced, and chopped or minced styles that have reasonably good character may be given a score of 24 to 26 points. Green olives that score into this classification shall not be graded above U.S. Grade B, regardless of the total score (this is a limiting rule). "Reasonably good character" means that the olives have a reasonably uniform tender texture that is characteristic of the variety; that there may be a moderate variation in the firmness, crispness, and fleshiness; and that the olives are reasonably free of slip skins.

(e) (*C*) *Classification.* Green olives of whole, pitted, stuffed, halved, sliced, chopped or minced, and broken pitted styles that have fairly good character may be given a score of 21 to 23 points. Green olives that score into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that the olives have a fairly good texture that is typical of the variety; that they may vary from fairly firm and crisp to fairly hard and tough; and that the olives are fairly free of slip skins.

(f) (*SStd*) *Classification.* Green olives that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

DEFINITION OF TERMS AND METHODS OF ANALYSIS

§ 52.5455 Definition of terms.

(a) *"Completely fermented olives"* means that the olives and brine contain not more than a trace of reducing sugars.

(b) *"Normal flavor and odor"* means that the green olives are free of any objectionable flavors or odors including, but not limited to, Zapatera and/or butyric acid flavors or odors.

(c) *"Garnishes"* means diced, cut, or chopped pimiento or sweet pepper; sliced, cut, chopped, or whole onions; sliced, cut, or chopped ripe olives; or other similar ingredients.

§ 52.5456 Methods of analysis.

The reducing sugars and salt in green olives are determined in accordance with the latest official method outlined in Official Methods of Analysis of the Association of Official Analytical Chemists or any other method that gives equivalent results.

LOT COMPLIANCE

§ 52.5457 Ascertaining the grade of a lot.

The grade of a lot of green olives covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§ 52.1 through § 52.87).

SCORE SHEET

§ 52.5458 Score sheet for green olives.

Number, size, and kind of container
Label (including size declaration)
Container mark or identification
Net weight (ounces)
Vacuum (inches) if any
Drained weight (ounces)
Type of pack
Size
Style
Average count per pound (whole style)
pH
Percent NaCl (sodium chloride)

Factors		Score points	
Color	20	(A)	18-20
		(B)	16-17
		(C)	[1] 14-15

		(SStd)	[1] 0–13
Uniformity of size.	20	(A)	18–20
		(B)	[2] 16–17
		(C)	[3] 14–15
		(SStd)	[4] 0–13
Absence of defects.	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(SStd)	[1] 0–20
Character	30	(A)	27–30
		(B)	[1] 24–26
		(C)	[1] 21–23
		(D)	[1] 0–20
Total score	100		
Normal flavor and odor			
Grade			

[1] Limiting rule.
[2] Limiting rule for Subpetite size.
[3] Limiting rule for sizes counting 221 to 275 per pound.
[4] Limiting rule for sizes counting more than 275 per pound.

Subpart—United States Standards for Grades of Canned Lemon Juice

SOURCE: 27 FR 10315, Oct. 23, 1962, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, GRADES, FILL OF CONTAINER

§ 52.5481 Product description.

Canned lemon juice is the undiluted, unconcentrated, unfermented juice obtained from sound, mature lemons of one or more of the high acid varieties, which fruit is prepared by sorting, and by washing prior to extraction of the juice to assure a clean and sanitary product. The product is sufficiently processed with heat to assure preservation in hermetically sealed containers.

§ 52.5482 Grades of canned lemon juice.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of canned lemon juice that: (1) Has good color; (2) is practically free of defects; (3) has good flavor; and (4) scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade C" (or "U.S. Standard") is the quality of canned lemon juice that: (1) Has fairly good color; (2) is fairly free of defects; (3) has fairly good flavor; and (4) scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned lemon juice that fails to meet the requirements of U.S. Grade C.

FILL OF CONTAINER

§ 52.5483 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality. It is recommended that the container be as full of lemon juice as practicable and that the product occupy not less than 90 percent of the water capacity of the container.

FACTORS OF QUALITY

§ 52.5484 Ascertaining the grade of a sample unit.

The grade of canned lemon juice is ascertained by considering the respective ratings for the factors of color, defects, and flavor (and aroma). The relative importance of each factor is expressed, numerically, on the scale of 100. The maximum number of points that may be given each factor are:

	Points
(1) Color	40
(2) Defects	30
(3) Flavor	30
Total score	100

§ 52.5485 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor is inclusive (for example, "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.5486 Color.

(a) (*A*) *classification*. Canned lemon juice that has good color may be given a score of 36 to 40 points. "Good color" means that the color is bright and typical of fresh, properly processed lemon juice, that is practically free of browning caused by scorching, oxidation, storage conditions, or any other causes.

(b) (*C*) *classification.* Canned lemon juice that has fairly good color may be given a score of 32 to 35 points. Canned lemon juice that is scored into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the color may be only fairly bright, but is not off-color, and is typical of properly processed lemon juice that is reasonably free of browning due to scorching, oxidation, improper storage, or any other causes.

(c) (*SStd*) *classification.* Canned lemon juice that fails to meet the requirements of paragraph (b) of this section may be given a score of 0 to 31 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.5487 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from particles of membrane, core or skin; from seeds or seed particles; and any other defects that affect the wholesomeness or detract from the appearance or utility of the product.

(b) (*A*) *classification.* Canned lemon juice that is practically free of defects may be given a score of 27 to 30 points. "Practically free of defects" means that there may be present: (1) Small seeds or portions thereof that are of such size that they could pass through round perforations not exceeding ⅛ inch in diameter, provided such seeds or portions thereof do not affect the appearance or drinking quality of the juice; (2) not more than 13 percent, by volume, of fine centrifuged pulp calculated as outlined in § 52.5490; (3) no coagulated pulp; (4) and that the juice does not contain peel, core, seeds, seed particles or other defects that detract from the appearance or utility of the product.

(c) (*C*) *classification.* Canned lemon juice that is fairly free of defects may be given a score of 24 to 26 points. Canned lemon juice that is scored into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly free of defects" means that there may be present: (1) Small seeds or portions thereof that are of such size that they could pass through round perforations not exceeding ⅛ inch in diameter, provided such seeds or portions thereof do not affect the appearance or drinking quality of the juice; (2) not more than 16 percent, by volume, of fine centrifuged pulp calculated as outlined in § 52.5490; (3) and that the juice does not contain coagulated pulp, peel, core, seeds, seed particles, or other defects that more than slightly detract from the appearance or utility of the product.

(d) (*SStd*) *classification.* Canned lemon juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

§ 52.5488 Flavor.

(a) The flavor of the product is evaluated after preparing as follows:

Lemon juice	30 ml.
Sugar	26 gm.
Water	160 ml.

(b) (*A*) *classification.* Canned lemon juice that has good flavor may be given a score of 27 to 30 points. "Good flavor" means that the product has the distinct flavor of properly prepared, freshly extracted canned lemon juice that is free of any trace of terpenic, oxidized, scorched, or caramelized flavors and is free of any other abnormal flavors. In addition, there is not less than 5.0 grams nor more than 7.0 grams of acid per 100 ml. of juice.

(c) (*C*) *classification.* Canned lemon juice that has fairly good flavor may be given a score of 24 to 26 points. Canned lemon juice that is scored into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule). "Fairly good flavor" means that the product has a normal flavor which may have a slightly caramelized or slightly oxidized flavor, but is free of off-flavors of any kind. In addition, there is not less than 4.5 grams nor more than 7.5 grams of acid per 100 ml. of juice.

(d) *(SStd) classification.* Canned lemon juice that fails to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS AND METHODS OF ANALYSES

§ 52.5489 Definition of terms.

(a) *Acid.* "Acid" means the number of grams of total acidity, calculated as anhydrous citric acid, per 100 ml. of canned lemon juice. Total acidity is determined by titration with standard sodium hydroxide solution, using phenolphthalein indicator.

(b) *Fine centrifuged pulp.* "Fine centrifuged pulp" means pulp, referred to in § 52.5487 *Defects,* that settles on centrifuging by the method outlined in § 52.5490.

(c) *Light membranous materials.* "Light membranous materials" means pulp including juice sacs but exclusive of peel particles, that is recoverable as outlined in § 52.5490. This material, in normal amounts, is not a defect for the purposes of these Standards. The amount of such pulp in the juice may be determined by the method outlined in this subpart.

§ 52.5490 Methods of analysis.

(a) *"Fine centrifuged pulp"* is calculated by: (1) Removing the light membranous material from the sample by pouring it through a No. 20 sieve, and (2) fill graduated centrifuge tubes of 50 ml. capacity with sieved lemon juice, and place in a suitable centrifuge. Adjust the speed as nearly as possible, according to diameter, as indicated in Table I and centrifuge as indicated in Table I for exactly 10 minutes. As used in this part, "diameter" means the overall distance between the bottoms of opposing centrifuge tubes in operating position. After centrifuging, the milliliter reading at the top of the layer of pulp in the tube is multiplied by two to give the percentage of pulp.

(b) "Light membranous materials" are recoverable by: (1) Pouring one liter of product through a U.S. Standard No. 20 circular sieve 8 inches in diameter with 20 meshes to the inch (0.0331 inch ±5 percent square openings) with the aid of a gentle stream of tap water;

(2) Rinse the retained pulp with a gentle stream of tap water only until all of the product is removed from the pulp;

(3) Dry and gather the pulp into a ball by shaking the sieve back and forth;

(4) As soon as the pulp has been gathered into a ball, place it into a suitable dry graduated cylinder or centrifuge tube and settle by tapping lightly in the palm of one's hand. If air pockets remain a thin spatula may be used to effect their removal;

(5) The number of milliliters of pulp divided by ten is the percent by volume of "light membranous material;"

(6) If the light membranous material so recovered exceeds 100 milliliters or will not dry and gather into a small ball, discard results and repeat the test using a sample so reduced in size as to yield less than 100 milliliters of such material which will so dry and gather. Calculate the percent of light membranous materials as follows:

Percent of light membranous materials by volume = (Ml. recovered material × 100)/(Ml. of sample)

TABLE I[1]

Diameter (inches)	Revolutions per minute
10	1,609
10½	1,570
11	1,534
11½	1,500
12	1,468
12½	1,438
13	1,410
13½	1,384
14	1,359
14½	1,336
15	1,313
15½	1,292
16	1,271
16½	1,252
17	1,234
17½	1,216
18	1,199

TABLE I [1]—Continued

Diameter (inches)	Revolutions per minute
18½	1,182
19	1,167
19½	1,152
20	1,137

[1] This table, calculated from the formula R.C.F. = 0.00001118 N^2r, provides a Relative Centrifugal Force of 364.6 times gravity.

LOT INSPECTION AND CERTIFICATION

§ 52.5491 Ascertaining the grade of a lot.

The grade of a lot of canned lemon juice covered by these standards is determined by the procedures set forth in the regulations governing inspection and certification of processed fruits and vegetables, processed products thereof, and certain other processed food products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.5492 Score sheet for canned lemon juice.

Size and kind of container ....

Container mark or identification:

Cans ....

Cases ....

Label ....

Liquid measure (fluid ounces) ....

Vacuum (inches) ....

Acid (grams/100ml.: calculated as anhydrous citric acid) ....

Factors		Score points	
Color	40	(A)	36–40
		(C)	[1] 32–35
		(SStd)	[1] 0–31
Defects	30	(A)	27–30
		(C)	[1] 24–26
		(SStd)	[1] 0–23
Flavor	30	(A)	27–30
		(C)	[1] 24–26
		(SStd)	[1] 0–23
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Apricots

SOURCE: 28 FR 6391, June 21, 1963, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.5521 Product description.

Frozen apricots are prepared from sound, mature, fresh, peeled or unpeeled fruit of any commercial variety of apricot which are sorted, washed, and may be trimmed to assure a clean and wholesome product. The apricots are properly drained of excess water before filling into containers; may be packed with the addition of nutritive sweetening ingredient(s) (including syrup and/or syrup containing pureed apricots) and/or suitable antioxidant ingredient(s) and/or any other ingredient(s) permissible under the provisions of the Federal Food, Drug, and Cosmetic Act. The apricots are prepared and frozen in accordance with good commercial practice; and are maintained at temperatures necessary for the preservation of the product.

§ 52.5522 Styles of frozen apricots.

(a) "Halves" are cut approximately in half along the suture from stem to apex and from which the pit has been removed.

(b) "Quarters" are apricot halves cut into two approximately equal parts.

(c) "Slices" are apricot halves cut into sectors smaller than quarters.

(d) "Diced" are apricots cut into approximate cubes.

(e) "Cuts" are apricots that are cut in such a manner as to change the original conformation and do not meet any of the foregoing styles.

(f) "Machine-pitted" means mechanically pitted in such a manner as to substantially destroy the conformation of the fruit in removing the pit.

§ 52.5523 Grades of frozen apricots.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of frozen apricots that: (1) Have similar varietal characteristics, (2) have a normal flavor and odor, (3) have good color, (4) are practically uniform in size and symmetry for the style of halves, (5) are practically free of defects, (6) have a good character, and (7) score not less than 90 points when scored in accordance with the scoring system outlined in this subpart: *Provided,* That frozen apricots may have a reasonably good character, and in the style of halves may be reasonably uniform in size and symmetry, if the total score is not less than 90 points.

(b) "U.S. Grade B" (or "U.S. Choice") is the quality of frozen apricots that: (1) Have similar varietal characteristics, (2) have a normal flavor and odor, (3) have a reasonably good color, (4) are reasonably uniform in size and symmetry for the style of halves, (5) are reasonably free of defects, (6) have a reasonably good character, and (7) score not less than 80 points when scored in accordance with the scoring system outlined in this subpart: *Provided,* That frozen apricots in the style of halves may be only fairly uniform in size and symmetry if the total score is not less than 80 points.

(c) "U.S. Grade C" (or "U.S. Standard") is the quality of frozen apricots that: (1) Have similar varietal characteristics, (2) have normal flavor and odor, (3) have fairly good color, (4) are fairly uniform in size and symmetry for the style of halves, (5) are fairly free of defects, (6) have fairly good character, and (7) score not less than 70 points when scored in accordance with the scoring system outlined in this subpart: *Provided,* That frozen apricots in the style of halves may vary in size if the total score is not less than 70 points.

(d) "Substandard" is the quality of frozen apricots that fail to meet the requirements of U.S. Grade C.

FACTORS OF QUALITY

§ 52.5524 Ascertaining the grade of a sample unit.

(a) *General.* In addition to considering other requirements outlined in the standard, the following quality factors are evaluated.

(1) *Factors not rated by score points.*

(i) Varietal characteristics;

(ii) Flavor and odor.

(2) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

Factors	Points
Color	30
Size and symmetry	10
Defects	30
Character	30
Total score	100

(b) *Definition of normal flavor and odor.* "Normal flavor and odor" means that the frozen apricots are free from objectionable flavors or objectionable odors of any kind.

(c) *Evaluation of quality.* Quality factors are evaluated immediately after thawing to the extent that the product is substantially free from ice crystals and can be handled as individual units.

§ 52.5525 Ascertaining the rating for factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for such factors and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "18 to 20 points" means 18, 19, or 20 points.)

§ 52.5526 Color.

(a) *General.* The score for the factor of color is evaluated by considering the overall color of the units. Abnormal discoloration near or within the pit cavity shall be considered in the evaluation of the overall color of the unit.

(b) (*A*) *Classification.* Frozen apricots that have good color may be given a score of 27 to 30 points. "Good color" means: that internally and externally the frozen apricots have a color that is bright, practically uniform, and typical of well-ripened apricots for the variety; and that deviations from such typical color do not exceed the allowances shown in Table I of this subpart: *Provided,* That such permitted deviations do not materially detract from the overall appearance of the product.

(c) (*B*) *Classification.* Frozen apricots that have reasonably good color may be given a score of 24 to 26 points. Frozen apricots that fall into this classification shall not be graded above

U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means: that internally and externally the frozen apricots have a color that is reasonably bright, fairly uniform, and typical of reasonably well-ripened apricots for the variety; and that deviations from such typical color do not exceed the allowances shown in Table I of this subpart: *Provided,* That such permitted deviations do not seriously detract from the overall appearance of the product.

(d) (*C*) *Classification.* Frozen apricots that have fairly good color may be given a score of 21 to 23 points. Frozen apricots that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score of the product (this is a limiting rule). "Fairly good color" means that the apricots are not materially darkened; and that deviations from such typical color do not exceed the allowances shown in Table I of this subpart.

(e) (*SStd*) *Classification.* Frozen apricots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—ALLOWANCES FOR COLOR VARIATION

Grade classification	Styles	Greenish-yellow		Green		Light brown; dark brown (Maximum)
		On ¼ or less surface area (Maximum)	On more than ¼ surface area (Maximum)	On ¼ or less surface area (Maximum)	On more than ¼ surface area (Maximum)	
A	Halves	15 percent by count.	5 percent by count.	5 percent by count.	2 percent by count.	None.
		But no more than a total of 15 percent by count.				
	Quarters; slices; diced; cuts.	12 percent by weight.	4 percent by weight.	4 percent by weight.	1.5 percent by weight.	None.
		But no more than a total of 12 percent by weight.				
	Machine pitted	15 percent by weight.	5 percent by weight.	5 percent by weight.	2 percent by weight.	None.
		But no more than a total of 15 percent by weight.				
B	Halves	No limit	20 percent by count.	10 percent by count.	5 percent by count.	5 percent by count.
		But no more than a total of 20 percent by count.				
	Quarters; slices; diced; cuts.	No limit	15 percent by weight.	8 percent by weight.	4 percent by weight.	2.5 percent by weight.
		But no more than a total of 15 percent by weight.				
	Machine pitted	No limit	20 percent by weight.	10 percent by weight.	5 percent by weight.	5 percent by weight.
		But no more than a total of 20 percent by weight.				
C	Halves	No limit	No limit	No limit	15 percent by count.	15 percent by count.
		But no more than a total of 20 percent by count.				
	Quarters; slices; diced; cuts.	No limit	No limit	No limit	10 percent by weight.	10 percent by weight.
		But no more than a total of 15 percent by weight.				
	Machine pitted	No limit	No limit	No limit	15 percent by weight.	15 percent by weight.
		But no more than 20 percent by weight.				

§ 52.5527 Size and symmetry.

(a) *General.* The factor of size and symmetry refers to the uniformity of size and to the symmetry of the units in the style of halves only. The total score for styles other than halves is determined by multiplying the sum of the scores assigned for color, defects, and character by 10 and dividing by 9, dropping any fractions.

(b) *Definitions.* (1) "Off-suture cut" means a halved apricot unit that has been cut at a distance greater than 3/8 inch from the suture.

(2) "Misshapen unit" means that a unit in the style of halves has been excessively trimmed so that its normal shape has been destroyed other than because of ripeness. Halves slightly split between the pit cavity and the outer edge are not considered misshapen units.

(c) (*A*) *Classification.* Frozen apricots in the style of halves that are practically uniform in size and symmetry may be given a score of 9 or 10 points. "Practically uniform in size and symmetry" means that not more than 10 percent, by count, of the units may be off-suture cuts or misshapen units; that the remaining units may vary slightly in thickness; and, in 90 percent, by count, of the remaining units having the most uniform size the weight of the largest full-size unit does not exceed the weight of the smallest full-size unit by more than 50 percent.

(d) (*B*) *Classification.* Frozen apricots in the style of halves that are reasonably uniform in size and symmetry may be given a score of 8 points. "Reasonably uniform in size and symmetry" means that not more than 20 percent, by count, of the units may be off-suture cuts or misshapen units; that the remaining units may vary moderately in thickness; and, in 90 percent, by count, of the remaining units having the most uniform size the weight of the largest full-size unit is not more than twice the weight of the smallest full-size unit.

(e) (*C*) *Classification.* Frozen apricots in the style of halves that are fairly uniform in size and symmetry may be given a score of 7 points. "Fairly uniform in size and symmetry" means that not more than 20 percent, by count, of the units may be misshapen units and any number of units may be off-suture cuts. Frozen apricots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(f) (*SStd*) *Classification.* Frozen apricots in the style of halves that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 6 points and shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule).

§ 52.5528 Defects.

(a) *General.* (1) The factor of defects as applicable for the respective styles refers to the degree of freedom from pit material, from harmless extraneous material, from peel (in peeled apricots), from short stems, from minor blemishes and blemishes, from crushed or broken units (except in cuts or machine-pitted styles), and from any other defects which affect the appearance or edibility of the product.

(2) "Ounces" and "by weight" with respect to the requirements of this section means the avoirdupois weight of fruit exclusive of packing media.

(3) "Average" (or the abbreviation "Avg") with respect to the requirements of this section means the average as ascertained from all sample units.

(b) *Definitions and explanations of defects.* (1) "Harmless extraneous material" means any vegetable substance (such as, but not limited to, a leaf or portion thereof or a large stem) that is harmless.

(2) "Short stem" means the short, thick, woody stem which attaches the apricot to the twig of the tree or other stem material of equivalent woodiness and shortness.

(3) "Pit material" means any whole pit or any piece of pit material regardless of size.

(4) "Minor blemish" means significant surface discolorations that are:

(i) Light brown to brown surface areas which, singly or in combination on a unit, exceed in the aggregate the area of a circle 3/16 inch in diameter but do not exceed in the aggregate the area of a circle ¼ inch in diameter; or

(ii) Single dark brown surface areas that do not exceed the area of a circle $\frac{3}{16}$ inch in diameter but which, singly or in combination with other "minor blemishes" on a unit, affect materially but not seriously the appearance of the unit.

(5) "Blemish" means scab, hail injury, discoloration, or other abnormalities in the following degree:

(i) Light brown to brown surface areas which, singly or in combination on a unit, exceed in the aggregate the area of a circle ¼ inch in diameter;

(ii) Blemishes that extend into the fruit tissue regardless of area or depth;

(iii) Single dark brown surface areas that exceed the area of a circle $\frac{3}{16}$ inch in diameter, whether or not the unit is affected by minor blemishes; or

(iv) Any blemish whether or not specifically defined or mentioned in this subparagraph which seriously affects the appearance of the unit.

(6) "Crushed or broken unit" in all styles other than cuts and machine-pitted means:

(i) A unit that has definitely lost its normal shape and bears marks of crushing or is otherwise crushed not due to ripeness; and

(ii) A unit of frozen apricots is "broken" if severed into definite parts; but halves of frozen apricots that are slightly or partially split or mashed from the edge to the pit cavity are not considered broken. Portions equivalent to a full-size unit that has been broken are considered as one unit in determining the percentage by count.

(c) (*A*) *Classification*. Frozen apricots that are practically free of defects may be given a score of 27 to 30 points "Practically free of defects" means that:

(1) Any defects present may no more than slightly affect the appearance or edibility of the product; and

(2) The defects present do not exceed the applicable allowances specified in Table II of this subpart.

(d) (*B*) *Classification*. Frozen apricots that are reasonably free of defects may be given a score of 24 to 26 points. Frozen apricots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) Any defects present do not materially detract from the appearance or edibility of the product; and

(2) The defects present do not exceed the applicable allowances specified in Table III of this subpart.

(e) (*C*) *Classification*. Frozen apricots that are fairly free from defects may be given a score of 21 to 23 points. Frozen apricots that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule) "Fairly free of defects" means that:

(1) Any defects present do not seriously detract from the appearance or edibility of the product; and

(2) The defects present do not exceed the applicable allowances specified in Table IV of this subpart.

(f) (*SStd*) *Classification*. Frozen apricots that fail to meet the requirements of paragraph (e) of this section may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE II—U.S. Grade A

[Maximum allowances for certain defects in frozen apricots]

Defects	Styles		
	Halves	Quarters; slices; diced; cuts	Machine pitted
Harmless extraneous material.	1 piece per 128 ozs. (average)	1 piece per 128 ozs. (average)	1 piece per 128 ozs. (average)
Peel (in peeled).	1 square inch per 16 ozs. (average).	1 square inch per 16 ozs. (average).	1 square inch per 16 ozs. (average).

TABLE II—U.S. Grade A—Continued

[Maximum allowances for certain defects in frozen apricots]

Defects	Styles		
	Halves	Quarters; slices; diced; cuts	Machine pitted
Small stems	1 per 24 ozs. (average)	1 per 24 ozs. (average)	1 per 24 ozs. (average)
Pit material	1 per 200 ozs. (average)	1 per 200 ozs. (average)	1 per 200 ozs. (average)
Crushed or broken units.	10 percent by count	5 percent by weight (cuts excluded)	Not applicable
Units affected by minor blemishes; and blemishes.	Total: 10 percent by count but no more than 5 percent by count blemished.	Total: 8 percent by weight but no more than 4 percent by weight blemished.	Total: 10 percent by weight but no more than 5 percent by weight blemished.

TABLE III—U.S. Grade B

[Maximum allowances for certain defects in frozen apricots]

Defects	Styles		
	Halves	Quarters; slices; diced; cuts	Machine pitted
Harmless extraneous material.	1 piece per 64 ozs. (average)	1 piece per 64 ozs. (average)	1 piece per 64 ozs. (average).
Peel (in peeled).	2 square inches per 16 ozs. (average).	2 square inches per 16 ozs. (average).	2 square inches per 16 ozs. (average).
Small stems	2 per 24 ozs. (average)	2 per 24 ozs. (average)	2 per 24 ozs. (average).
Pit material	1 per 100 ozs. (average)	1 per 100 ozs. (average)	1 per 100 ozs. (average).
Units affected by minor blemishes; and blemishes.	Total: 20 percent by count but no more than 10 percent by count blemished.	Total: 15 percent by weight but no more than 8 percent by weight blemished.	Total: 20 percent by weight but no more than 10 percent by weight blemished.

TABLE IV—U.S. Grade C

[Maximum Allowances for Certain Defects in Frozen Apricots]

Defects	Styles		
	Halves	Quarters; slices; diced; cuts	Machine pitted
Harmless extraneous material.	1 piece per 32 ozs. (average)	1 piece per 32 ozs. (average)	1 piece per 32 ozs. (average)
Peel (in peeled).	3 square inches per 16 ozs. (average).	3 square inches per 16 ozs. (average).	3 square inches per 16 ozs. (average).
Small stems	3 per 24 ozs. (average)	3 per 24 ozs. (average)	3 per 24 ozs. (average).
Pit material	1 per 100 ozs. (average)	1 per 100 ozs. (average)	1 per 100 ozs. (average).
Units affected by minor blemishes; and blemishes.	Total: 40 percent by count but no more than 15 percent by count blemished.	Total: 30 percent by weight but no more than 10 percent by weight blemished.	Total: 40 percent by weight but no more than 15 percent by weight blemished.

§ 52.5529 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture and condition of the flesh, the firmness and tenderness of the frozen apricots and, except for specified styles, their tendency to retain their apparent original conformation and size without material disintegration.

(b) (*A*) *Classification.* Frozen apricots that have good character may be given a score of 27 to 30 points. "Good character" has the following meanings with respect to the applicable styles:

(1) *Halves.* The units have a practically uniform tender, fleshy texture typical of well-ripened, properly prepared and properly processed frozen apricots; the units are uniformly intact and may be soft but hold their original conformation and size without material disintegration; and not more than a total of 5 percent, by count, of all the units may be firm or very soft.

(2) *Quarters; slices; diced; cuts.* The product generally has a texture typical of well-ripened, properly prepared, and properly processed frozen apricots; the units are reasonably intact and may be soft but not mushy; and not more than a total of 5 percent, by weight, of all the units may be firm or very soft.

(3) *Machine-pitted.* The product generally has a texture typical of well-ripened, properly prepared, and properly processed frozen apricots; and the units may vary from slightly firm to very soft.

(c) (*B*) *Classification.* Frozen apricots that have reasonably good character may be given a score of 24 to 26 points. "Reasonably good character" has the following meanings with respect to the applicable styles:

(1) *Halves.* The units have a reasonably uniform, reasonably tender, and reasonably fleshy texture typical of reasonably well-ripened, properly prepared, and properly processed frozen apricots; the units are reasonably intact and may be variable in texture; and not more than a total of 10 percent, by count, of all the units may be very soft or very firm.

(2) *Quarters; slices; diced; cuts.* The product generally has a texture typical of reasonably well-ripened, properly prepared, and properly processed frozen apricots; the units are fairly intact and may be variable in texture; and not more than a total of 10 percent, by weight, of all the units may be very soft or very firm.

(3) *Machine-pitted.* The product generally has a texture typical of reasonably well-ripened, properly prepared, and properly processed frozen apricots; and the units may be variable in texture from firm to very soft fruit.

(d) (*C*) *Classification.* Frozen apricots that have fairly good character may be given a score of 21 to 23 points. Frozen apricots that fall into this classification shall not be graded above U.S. Grade C, regardless of the total score for the product (this is a limiting rule). "Fairly good character" means that, regardless of style, the product generally, or the units of frozen apricots, may be firm or mushy; and that not more than a total of 10 percent, by weight, of the frozen apricots may be very firm units.

(e) (*SStd*) *Classification.* Frozen apricots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 20 points and shall not be graded Substandard, regardless of the total score for the product (this is a limiting rule).

LOT COMPLIANCE

§ 52.5530 Ascertaining the grade of a lot.

The grade of a lot of frozen apricots covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.5531 Score sheet for frozen apricots.

Size and kind of container
Container mark or identification
Containers or sample
Cases
Label (style, varietal type, added ingredients, fruit to sugar, etc. ratio (if shown))
Net weight (ounces)
Style
Packing medium

Factors		Score points	
Color	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(SStd)	[1] 0-20
Size and symmetry	10	(A)	9-10
		(B)	8
		(C)	[2] 7
		(SStd)	[3] 6
Defects	30	(A)	27-30
		(B)	[1] 24-26
		(C)	[1] 21-23
		(SStd)	[1] 0-20
Character	30	(A)	27-30
		(B)	24-26
		(C)	[1] 21-23
		(SStd)	[1] 0-20
Total score	100		
Normal flavor and odor			
Grade			

[1] Indicates limiting rule.

[2] Limited to Grade B or lower.

[3] Limited to Grade C or lower.

Subpart—United States Standards for Grades of Canned Dried Prunes

SOURCE: 32 FR 7570, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES AND VARIETIES, AND GRADES

§ 52.5601 Product description.

"Canned dried prunes" is the product represented as defined in the standards of identity for canned prunes (21 CFR 145.190) issued pursuant to the Federal Food, Drug, and Cosmetic Act, and are either pitted or unpitted.

[41 FR 15018, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5602 Types and varieties of canned dried prunes.

(a) "Sweet types" include such varieties as French, Imperials, Sugar, and Robe de Sergeant varieties.

(b) "Tart type" includes the Italian variety.

§ 52.5603 Grades of canned dried prunes.

(a) "U.S. Grade A" or "U.S. Fancy" canned dried prunes are dried prunes of similar varietal characteristics which possess a normal flavor and are of such quality with respect to color, uniformity of size, absence of defects, and character of fruit as to score not less than 90 points when scored in accordance with the scoring system outlined herein.

(b) "U.S. Grade B" or "U.S. Choice" canned dried prunes are dried prunes of similar varietal characteristics which possess a reasonably uniform typical color; are reasonably free from defects; possess a reasonably good, tender, fleshy texture; possess a normal flavor; and are of such quality with respect to uniformity of size as to score not less than 75 points when scored in accordance with the scoring system outlined herein.

(c) "U.S. Grade C" or "U.S. Standard" canned dried prunes are dried prunes which possess a fairly uniform, fairly good typical color; are fairly free from defects; possess a fairly good texture; possess a normal flavor; and are of such quality with respect to uniformity of size as to score not less than 60 points when scored in accordance with the scoring system outlined herein.

(d) "U.S. Grade D" or "Substandard" canned dried prunes are dried prunes that are wholesome and edible but fail to meet the requirements of U.S. Grade C or U.S. Standard.

LIQUID MEDIA, FILL OF CONTAINER, DRAINED WEIGHTS, COUNTS

§ 52.5604 Liquid media and Brix measurements.

"Cut-out" requirements for liquid media in canned dried prunes are not incorporated in the grades of the finished product since sirup or any other liquid medium as such, is not a factor of quality for the purposes of these grades. The designations of liquid packing media and the Brix measurements, where applicable, are as follows:

Designations	Brix measurements
"Extra heavy sirup," or "Extra heavily sweetened fruit juice(s) and water," or "Extra heavily sweetened fruit juice(s)."	30° or more but not more than 45°.

Designations	Brix measurements
"Heavy sirup;" or "Heavily sweetened fruit juice(s) and water;" or "Heavily sweetened fruit juice(s)."	24° or more but less than 30°.
"Light sirup;" or "lightly sweetened fruit juice(s) and water;" or "Lightly sweetened fruit juice(s)."	20° or more but less than 24°.
"Slightly sweetened water;" or "Extra light sirup;" or "Slightly sweetened fruit juice(s) and water;" or "Slightly sweetened fruit juice(s)."	Less than 20°.
"In water"	Not applicable
"In fruit juice(s) and water"	Do
"In fruit juice(s)"	Do

[41 FR 15018, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5605 Recommended fill of container.

The container shall be filed with dried prunes as full as practicable without impairment of quality. The product and packing medium occupies not less than 90 percent of the total volume capacity of the container.

§ 52.5606 Recommended minimum drained weights.

(a) *General.* (1) The minimum product since drained weight, as such, various styles in Table II are not incorporate in the grades of the finished product since drained weight, as such, is not a factor of quality for the purposes of these grades.

(2) The recommended minimum drained weights are based on equalization of the product 30 days or more after the product has been canned.

(b) *Method for ascertaining drained weight.* The drained weight is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937±3 percent, square openings) so as to distribute the product evenly, inclining the sieve to a 17 to 20 degree angle to facilitate drainage, and allowing the product to drain for two minutes. The drained weight is the weight of the sieve and prunes less the weight of the dry sieve. A sieve 8 inches in diameter is used if the contents of the container is less than three pounds, and a sieve 12 inches in diameter is used if the contents of the container is three pounds or more.

(c) *Compliance with recommended minimum drained weights.* A lot of canned prunes is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended minimum drained weight specified in Table I; and

(2) Any sample unit(s) which fails to meet the recommended minimum drained weight is within the range of good commercial practice.

TABLE I

Container size or name	Recommended drained weight (ounces)		
	Metal containers		Glass containers—regular pack
	Regular pack	Heavy pack	
8 oz	5½		
No. 1 tall	10¾		
No. 2	13		
No. 2½	19	29	18
No. 10	70	110	

(3) Canned dried prunes that meet the recommended drained weight requirements for "Heavy Pack" will be certified as "Heavy Pack" in addition to the grade statement.

[41 FR 15019, Apr. 9, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.5607 Count of prunes.

Federal inspection certificates will indicate the count of prunes found upon examination.

FACTORS OF QUALITY

§ 52.5608 Ascertaining the grade.

The grade of canned dried prunes may be ascertained by considering, in addition to the foregoing requirements, the following factors: Color, uniformity of size, absence of defects, and character of fruit. The relative importance of each factor has been expressed numerically on a scale of 100.

The maximum number of points that may be given for each factor is:

	Points
Color	20
Uniformity of size	15
Absence of defects	30
Character of fruit	35
Total score	100

§ 52.5609 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical ranges within each factor are inclusive. For example, the range 18 to 20 means 18, 19, and 20.

§ 52.5610 Color.

(a) (*A*) *Classification.* Canned dried prunes that possess a practically uniform, typical color may be given a score of 18 to 20 points. "Practically uniform, typical color" means that the color of the skins of the prunes is typical and may be black, blue black, or reddish brown; and that not more than 5 percent by count of the prunes may possess a dull chocolate brown surface color or may possess abnormal darkening of the flesh due to caramelization or fermentation.

(b) (*B*) *Classification.* If the canned dried prunes possess a reasonably uniform, typical color, a score of 15 to 17 points may be given. "Reasonably uniform, typical color" means that the color of the skins of the prunes is typical and may be black, blue black, or reddish brown; and that not more than 10 percent by count of the prunes may possess a dull chocolate brown surface color or may possess abnormal darkening of the flesh due to caramelization or fermentation.

(c) (*C*) *Classification.* If the canned dried prunes possess a fairly uniform, fairly good typical color, a score of 12 to 14 points may be given. Canned dried prunes that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product. "Fairly uniform, fairly good typical color" means that the skins of the prunes may vary in shades of typical colors and that not more than 15 percent by count of the prunes may possess a dull chocolate brown surface color or may possess abnormal darkening of the flesh due to caramelization or fermentation.

(d) (*D*) *Classification.* Canned dried prunes that are definitely off color for any reason or that otherwise fail to meet requirements of paragraph (c) of this section may be given a score of zero to 11 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product.

§ 52.5611 Uniformity of size.

(a) (*A*) *Classification.* Canned dried prunes that are practically uniform in size may be given a score of 14 or 15 points. "Practically uniform in size" means that the weight of the largest prune may not exceed the weight of the smallest prune by more than 75 percent.

(b) (*B*) *Classification.* If the canned dried prunes are reasonably uniform in size, a score of 12 or 13 points may be given. "Reasonably uniform in size" means that the weight of the largest prune may not be more than twice the weight of the smallest prune.

(c) (*C*) *Classification.* Canned dried prunes that vary in size may be given a score of 10 or 11 points.

§ 52.5612 Absence of defects.

(a) *Definitions of defects.* The factor of absence of defects refers to the degree of freedom from the following:

(1) Prunes that possess growth cracks, splits, breaks in the skin, or skin damage of the following descriptions:

(i) Calloused growth cracks aggregating more than ⅜ inch in length.

(ii) Splits or breaks not having calloused edges when the flesh is mashed out beyond the protecting skin so as to affect materially the normal appearance of the prunes.

(iii) Any cracks, splits, or breaks open to the pit.

(iv) Skin damage caused by overdripping, rain processing, or other causes which materially affects the appearance of the prunes.

(2) Prunes that possess areas of scab of the following descriptions:

(i) Tough or thick scab exceeding in the aggregate the area of a circle ⅜ inch in diameter.

(ii) Scab of other character exceeding in the aggregate the area of a circle ¾ inch in diameter.

(3) Prunes that are so affected by burning or scorching in the sun, or in dehydration, as to damage materially the skin or flesh.

(4) Prunes that are damaged by insect injury or other similar defects.

(5) "Tough or thick scab" means thick leathery areas on the skin frequently formed as the result of thrip injury, mildew, leaf chafing, limb rubs, or other means. Such scab is to be distinguished from "scab or other character" which is more or less inconsequential and practically blends in color with the skin on the portion of the prune not affected.

(6) "Damaged by insect injury" means healed or unhealed surface blemishes, and healed or unhealed blemishes in the flesh which materially affect the appearance, edibility, or keeping quality of the fruit but which do not possess evidence of insect infestation.

(7) "Damaged by other similar defects" means any injury or defect or group of defects not mentioned herein which materially affect the appearance, edibility or keeping quality of the fruit.

(b) (*A*) *Classification.* Canned dried prunes that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that there may be present not more than 5 percent by count of prunes affected by any defect or any combination of defects mentioned in paragraphs (a)(1), (2), (3), and (4) of this section. One prune that is defective is permitted if it exceeds 5 percent by count.

(c) (*B*) *Classification.* If the canned dried prunes are reasonably free from defects, a score of 22 to 26 points may be given. "Reasonably free from defects" means that there may be present not more than 10 percent by count of prunes affected by any defect or any combination of defects mentioned in paragraphs (a)(1), (2), (3), and (4) of this section. One prune that is defective is permitted if it exceeds 10 percent by count.

(d) (*C*) *Classification.* If the canned dried prunes are fairly free from defects, a score of 17 to 21 points may be given. Canned dried prunes that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product. "Fairly free from defects" means that there may be present not more than 15 percent by count of prunes affected by any defect or combination of defects mentioned in paragraphs (a)(1), (2), (3), and (4) of this section.

(e) (*D*) *Classification.* Canned dried prunes that fail to meet the requirements of paragraph (d) of this section, may be given a score of 0 to 16 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product.

§ 52.5613 Character of fruit.

(a) (*A*) *Classification.* Canned dried prunes that possess a good, tender, fleshy texture may be given a score of 31 to 35 points. "Good tender, fleshy texture" means that the prunes are thick-fleshed; that not more than 5 percent by count of prunes have fibrous or tough skins; and that not more than 10 percent by count of prunes may be soft or hard in texture. One prune that possesses a tough skin, is soft, or is hard, is permitted, if one prune exceeds 5 percent or 10 percent by count.

(b) (*B*) *Classification.* If canned dried prunes possess a reasonably good, tender, fleshy texture, a score of 26 to 30 points may be given. "Reasonably good, tender, fleshy texture" means that the prunes are reasonably thick-fleshed; that not more than 10 percent by count of prunes may have fibrous or tough skins; and that not more than 15 percent by count of prunes may be soft or hard in texture.

(c) (*C*) *Classification.* If the canned dried prunes possess a fairly good texture, a score of 21 to 25 points may be given. Canned dried prunes that fall into this classification shall not be graded above U.S. Grade C or U.S. Standard, regardless of the total score for the product. "Fairly good texture" means that the prunes may vary in thickness and texture of flesh or may possess fibrous or tough skins; and that not more than 20 percent by count of prunes may be soft or hard in texture.

(d) (*D*) *Classification*. Canned dried prunes that fail to meet the requirements of paragraph (c) of this section may be given a score of zero to 20 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product.

EXPLANATION OF TERMS

§ 52.5614 Explanation of terms.

(a) "24° Brix" means that the packing medium surrounding the fruit tests 24 degrees when tested with a Brix spindle, or hydrometer, or with a refractometer, read at the proper temperature for the instrument used.

(b) "Normal canned dried prune flavor" means that the product is free from objectionable odors or objectionable flavors of any kind.

LOT COMPLIANCE

§ 52.5615 Ascertaining the grade of a lot.

The grade of a lot of canned dried prunes covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

SCORE SHEET

§ 52.5616 Score sheet for canned dried prunes.

Number, size, kind of container
Can mark
Label
Net weight (in ounces)
Vacuum reading (in inches)
Drained weight (in ounces)
Sirup (Degrees Brix)
Type
Count

Factors			Score points
Color	20	(A)	18-20
		(B)	15-17
		(C)	[1] 12-14
		(D)	[1] 0-11
Uniformity of size	15	(A)	14-15
		(B)	12-13
		(C)	10-11
Absence of defects	30	(A)	27-30
		(B)	22-26
		(C)	[1] 17-21
		(D)	[1] 0-16
Character of fruit	35	(A)	31-35
		(B)	26-30
		(C)	[1] 21-25
		(D)	[1] 0-20
Total score	100		

Grade
Flavor

[1] Indicates limiting rules within classification.

Subpart—United States Standards for Grades of Dried Apricots

SOURCE: 32 FR 7572, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, MOISTURE, SIZES

§ 52.5761 Product description.

Dried apricots are the halved and pitted fruit of the apricot tree (Prunus armeniaca) from which the greater portion of moisture has been removed. Before packing, the dried fruit is processed to cleanse the fruit and may be sulfured sufficiently to retain a characteristic color.

§ 52.5762 Moisture.

Federal inspection certificates shall indicate the moisture content of the finished product which shall be not more than 26 percent by weight for sizes No. 1, No. 2, and No. 3, and for slabs, and not more than 25 percent by weight for other sizes.

§ 52.5763 Sizes.

(a) Federal inspection certificates shall indicate the size or combination of sizes of halved apricots found upon examination; or shall indicate "Slabs" if the apricots are such, or "Whole Pitted" (or "Slip Pitted") if the apricots are found to be of this style.

(b) The various sizes of dried apricots, except for slabs (including "whole pitted" or "slip pitted" apricots) are as follows:

No. 1 Size (Jumbo Size)	1⅜ inches, or inches in diameter.
No. 2 Size (Extra Fancy Size)	1¼ inches to 1⅜ inches in diameter.
No. 3 Size (Fancy Size)	1⅛ inches to 1¼ inches in diameter.
No. 4 Size (Extra Choice Size)	1 inch to 1⅛ inches in diameter.
No. 5 Size (Choice Size)	15/16 inch to 1 inch in diameter.
No. 6 Size (Standard Size)	Less than 15/16 inch in diameter.

(1) "Diameter" means the shortest measurement across the face of the apricot half when restored to its normal shape.

(2) In determining compliance with size requirements of this section, dried apricots will be considered as of one size if not more than 10 percent by weight of the fruit varies from the size range.

GRADES OF DRIED APRICOTS (OTHER THAN SLAB GRADES)

§ 52.5764 U.S. Grade A or U.S. Fancy.

(a) U.S. Grade A or U.S. Fancy dried apricots possess similar varietal characteristics; and possess a practically uniform, bright typical color, characteristic of well-matured apricots. The fruit may possess pale yellow areas around the stem and that do not exceed an area equivalent to one-eighth of the outer surface side of the unit; not more than 5 percent by weight of the fruit may be of a color described in U.S. Grade B or U.S. Choice, but none of the fruit may be of a color described in U.S. Grade C or U.S. Standard.

(b) Not more than a total tolerance of 10 percent by weight may be slabs, immature, or may possess pits or pieces of pits; may be damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided*, That, not more than two-fifths of the total tolerance, or 4 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than one-tenth of the total tolerance, or 1 percent by weight, may be affected by decay.

§ 52.5765 U.S. Grade B or U.S. Choice.

(a) U.S. Grade B or U.S. Choice dried apricots possess similar varietal characteristics; and possess a reasonably uniform, bright typical color, characteristic of reasonably well-matured apricots. The fruit may possess pale yellow areas around the stem end that do not exceed an area equivalent to one-fourth of the outer surface side of the unit; not more than 10 percent by weight of the fruit may be of a color described in U.S. Grade C or U.S. Standard, but none of the units may possess light green areas that exceed an area equivalent to one-fourth of the outer surface side of the unit.

(b) Not more than a total tolerance of 15 percent by weight may be slabs, immature, or may possess pits or pieces of pits, may be damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided*, That, not more than one-third of the total tolerance, or 5 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than one-fifteenth of the total tolerance, or 1 percent by weight, may be affected by decay.

§ 52.5766 U.S. Grade C or U.S. Standard.

(a) U.S. Grade C or U.S. Standard dried apricots possess similar varietal characteristics; and possess a fairly uniform typical color, characteristic of fairly well-matured apricots. The fruit may be pale yellow in color and may possess light green areas around the stem end of the fruit that do not exceed an area equivalent to one-quarter of the outer surface side of the unit, but not more than 15 percent by weight of the total fruit may possess light green areas that exceed an area equivalent to one-quarter of the outer surface side of the unit.

(b) Not more than a total tolerance of 20 percent by weight of the fruit may be slabs, immature, or possess pits or pieces of pits; may be damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided*, That, not more than one-fourth of the total tolerance, or 5 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than one-tenth of the total tolerance, or 2 percent by weight, may be affected by decay.

§ 52.5767 U.S. Grade D or Substandard.

U.S. Grade D or Substandard dried apricots are wholesome and edible fruit that fails to meet the requirements of U.S. Grade C or U.S. Standard: *Provided*, That, not more than 20 percent by weight of the total fruit may be slabs; and not more than 5 percent by weight of the total fruit may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than 2 percent by weight of the total fruit may be affected by decay.

GRADES OF DRIED APRICOTS (SLABS)

§ 52.5768 U.S. Grade A (Slabs) or U.S. Fancy (Slabs).

U.S. Grade A (Slabs) or U.S. Fncy (Slabs) dried apricots meet the requirements of U.S. Grade A or U.S. Fancy, except that there is no limit to the percentage of slabs.

§ 52.5769 U.S. Grade B (Slabs) or U.S. Choice (Slabs).

U.S. Grade B (Slabs) or U.S. Choice (Slabs) dried apricots meet the requirements of U.S. Grade B or U.S. Choice, except that there is no limit to the percentage of slabs.

§ 52.5770 U.S. Grade C (Slabs) or U.S. Standard (Slabs).

U.S. Grade C (Slabs) or U.S. Standard (Slabs) dried apricots meet the requirements of U.S. Grade C or U.S. Standard, except that there is no limit to the percentage of slabs.

§ 52.5771 U.S. Grade D (Slabs) or Substandard (Slabs).

U.S. Grade D (Slabs) or Substandard (Slabs) dried apricots are wholesome and edible fruit that fails to meet the requirements of U.S. Grade C (Slabs) or U.S. Standard (Slabs): *Provided*, That, not more than 5 percent by weight of the total fruit may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than 2 percent by weight of the total fruit may be affected by decay.

EXPLANATION OF TERMS

§ 52.5772 Explanation of terms.

(a) *Damage or other defects*. (1) "Damaged by discoloration" means that the apricots have become excessively darkened. Darkening of otherwise sound fruit characteristic of fruit held in storage, in keeping with good commercial practice, shall not be considered as damaged by discoloration unless excessively darkened.

(2) "Damaged by sunburn" means any substantial damage to color or texture of skin caused by excessive heat from the sun.

(3) "Damaged by hail marks, scab, or disease" means that the combined area of all such defects, or of any one such defect, exceeds in the aggregate an area equivalent to the area of a circle three-eighths inch in diameter.

(4) "Damaged by other similar defects" means any injury or defect or group of defects not mentioned herein which materially affect the appearance, edibility, or keeping quality of the fruit.

(5) "Damaged by insect injury" means healed or unhealed surface blemishes, and healed or unhealed blemishes in the flesh which materially affect the appearance, edibility, or keeping quality of the fruit but which do not possess evidence of insect infestation.

(6) "Affected by insect infestation" means that the dried apricots show the presence of insects, insect frag-

ments, or excreta. No live insects are permitted.

(7) "Affected by imbedded dirt" means the units have sufficient quantities of adhering dirt to give the fruit a dirty, smudgy appearance and dirt which may not be removed readily in washing the fruit.

(b) *Maturity.* (1) "Well-matured" means that the apricots are fully ripe.

(2) "Reasonably well-matured" means that the apricots are firm and may not have reached the fully ripe stage.

(3) "Fairly well-matured" means that the apricots may be hard but not immature.

(4) "Immature" means that the apricots are tough or possess a green or other color indicative of immature fruit.

(c) *Slabs.* "Slabs" are apricots that have been mashed, broken, or mutilated to the extent that they have lost their normal contour and have become definitely flattened at the edge or rim. A half that has a slightly torn edge is not considered a slab. For the purpose of these grades "whole pitted" (or "slip pitted") dried apricots are considered as slabs.

WORK SHEET

§ 52.5773 Work sheet and summary of requirements for dried apricots.

Size of case or package ....
Markings ....
Label or brand ....
Net weight ....
Size or sizes ....
Moisture content ....

	A	B	C	D	A Slabs	B Slabs	C Slabs	D Slabs
	Minimum requirements (percent)							
COLOR:								
Grade A color	95				95			
Grade B color	5	90			5	90		
Grade C color		10	100			10	100	
	Maximum tolerances (percent)							
DEFECTS:								
Total defects	10	15	20		10	15	20	
Slabs				20	[1]	[1]	[1]	[1]
Immature: fruit possessing pits or pieces of pits; damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; and	10	15	20		10	15	20	
	But not more than—							
Affected by mold, decay, insect infestation, imbedded dirt, or other foreign material	4	5	5	5	4	5	5	5
	But not more than—							
Decay	1	1	2	2	1	1	2	2
Grade								

[1] No limits.

Subpart—United States Standards for Grades of Dried Peaches

SOURCE: 32 FR 7574, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, MOISTURE, TYPES AND VARIETIES, SIZES

§ 52.5801 Product description.

Dried peaches are the halved and pitted fruit of the peach tree (Prunes persica) from which the greater portion of moisture has been removed. Before packing, the dried fruit is processed to cleanse the fruit and may be sulfured sufficiently to retain a characteristic color.

§ 52.5802 Moisture.

Federal inspection certificates shall indicate the moisture content of the finished product which shall be not more than 25 percent by weight.

§ 52.5803 Types and varieties of dried peaches.

(a) *Freestone.* (1) Muir variety.

(2) Lovell variety.

(3) Elberta variety.

(4) Other freestone varieties or mixed freestone varieties.

(b) *Clingstone.* (1) Midsummer variety.

(2) Phillips variety.

§ 52.5804 Sizes of dried peaches.

(a) Federal inspection certificates shall indicate the size or combination of sizes of halved peaches found upon examination.

(b) The various sizes of dried peaches are as follows:

No. 1 Size (Jumbo Size)	2 inches or larger in diameter
No. 2 Size (Extra Fancy Size)	1¾ inches to 2 inches in diameter.
No. 3 Size (Fancy Size)	1½ inches to 1¾ inches in diameter.
No. 4 Size (Extra Choice Size)	1⅜ inches to 1½ inches in diameter.
No. 5 Size (Choice Size)	1⅛ inches to 1⅜ inches in diameter.
No. 6 Size (Standard Size)	Less than 1⅛ inches in diameter

(1) "Diameter" means the shortest measurement across the face of the peach half when restored to its normal shape.

(2) In determining compliance with size requirements listed above, dried peaches will be considered as of one size if not more than 10 percent by weight of halves vary from the size range.

GRADES OF DRIED PEACHES

§ 52.5805 U.S. Grade A or U.S. Fancy.

(a) U.S. Grade A or U.S. Fancy dried peaches possess similar varietal characteristics; and possess a practically uniform, bright typical color, characteristic of well-matured peaches. Not more than 5 percent by weight of the fruit may be of a color described in U.S. Grade B or U.S. Choice, and none of the fruit may be of a color described in U.S. Grade C or U.S. Standard.

(b) Not more than a total tolerance of 10 percent by weight may be slabs, immature, or may possess pits or pieces of pits; may be damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided,* That, not more than three-tenths of the total tolerance, or 3 percent by weight, may possess pits or pieces of pits; not more than two-fifths of the total tolerance, or 4 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided,* That, not more than one-tenth of the total tolerance, or 1 percent by weight, may be affected by decay.

§ 52.5806 U.S. Grade B or U.S. Choice.

(a) U.S. Grade B or U.S. Choice dried peaches possess similar varietal characteristics; and possess a reasonably uniform, bright typical color, characteristic of reasonably well-matured peaches. Not more than 10 percent by weight of the fruit may be of a color described in U.S. Grade C or U.S. Standard.

(b) Not more than a total tolerance of 15 percent by weight may be slabs, immature, or may possess pits or pieces of pits; may be damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided,* That, not more than one-third of the total tolerance, or 5 percent by weight, may possess pits or pieces of pits; not more than one-third of the total tolerance, or 5 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided,* That, not more than one-fifteenth of the total tolerance, or 1 percent by weight, may be affected by decay.

§ 52.5807 U.S. Grade C or U.S. Standard.

(a) U.S. Grade C or U.S. Standard dried peaches possess similar varietal characteristics; and possess a fairly uniform typical color, characteristic of fairly well-matured peaches.

(b) Not more than a total tolerance of 20 percent by weight of the fruit may be slabs, immature, or possess pits or pieces of pits; may be damaged by discoloration, sunburn, hail marks, scab disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided,* That, not more than one-half of the total tolerance, or 10 percent by weight, may possess pits or pieces of pits; not more than one-fourth of the total tolerance, or 5 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided,* That, not more than one-tenth of the total tolerance, or 2 percent by weight, may be affected by decay.

§ 52.5808 U.S. Grade D or Substandard.

U.S. Grade D or Substandard dried peaches are wholesome and edible fruit that fails to meet the requirements of U.S. Grade C or U.S. Standard: *Provided,* That, not more than 5 percent by weight of the total fruit may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided,* That, not more than 2 percent by weight of the total fruit may be affected by decay.

EXPLANATION OF TERMS

§ 52.5809 Explanation of terms.

(a) *Damage or other defects.* (1) "Damaged by discoloration" means that the peaches have become excessively darkened. Darkening of otherwise sound fruit characteristic of fruit held in storage, in keeping with good commercial practice, shall not be considered as damaged by discoloration unless excessively darkened.

(2) "Damaged by sunburn" means any substantial damage to color or texture of skin caused by excessive heat from the sun.

(3) "Damaged by hail marks, scab, or disease" means that the combined area of all such defects, or of any one such defect exceeds in the aggregate an area equivalent to the area of a circle three-eighths inch in diameter.

(4) "Damaged by other similar defects" means any injury or defect or group of defects not mentioned herein which materially affect the appearance, edibility, or keeping quality of the fruit.

(5) "Damaged by insect injury" means healed or unhealed surface blemishes, and healed or unhealed blemishes in the flesh which materially affect the appearance, edibility, or keeping quality of the fruit but which do not possess evidence of insect infestation.

(6) "Affected by insect infestation" means that the dried peaches show the presence of insects, insect fragments, or excreta. No live insects are permitted.

(7) "Affected by imbedded dirt" means the units have sufficient quantities of adhering dirt to give the fruit a dirty, smudgy appearance and dirt which may not be removed readily in washing the fruit.

(b) *Maturity.* (1) "Well-matured" means that the peaches are fully ripe.

(2) "Reasonably well-matured" means that the peaches are firm and may not have reached the fully ripe stage.

(3) "Fairly well-matured" means that the peaches may be hard but not immature.

(4) "Immature" means that the peaches are tough or possess green or other color indicative of immature fruit.

(c) *Slabs.* "Slabs" are peaches that have been mashed, broken, or mutilated to the extent that they have lost their normal contour and have become definitely flattened at the edge or rim. A half that has a slightly torn edge is not considered a slab.

WORK SHEET

§ 52.5810 Work sheet and summary of requirement for dried peaches.

	A	B	C	D
Size of case or package				
Markings				
Label or brand				
Net weight				
Size or sizes				
Moisture content				
COLOR	Minimum requirements			
Grade A color	95%			
Grade B color	5%	90%		
Grade C color		10%	100%	
DEFECTS	Maximum tolerances			
Total defects	10%	15%	20%	
Slabs, and immature; damaged by discoloration, sunburn, hail marks, scab, disease, insect injury, or other similar defects; and	10%	15%	20%	
	But not more than			
Fruit possessing pits or pieces of pits; and	3%	5%	10%	
	But not more than			
Affected by mold, decay, insect infestation, imbedded dirt, or other foreign material	4%	5%	5%	5%
	But not more than			
Decay	1%	1%	2%	2%
Grade				

Subpart—United States Standards for Grades of Dried Pears

SOURCE: 32 FR 7575, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, MOISTURE, SIZES

§ 52.5841 Product description.

Dried pears are the halved fruit of the pear tree (Pyrus communis) which may or may not be cored, from which the external stems and calyx cups have been removed, and from which the greater portion of the moisture has been removed. Before packing, the dried fruit is processed to cleanse the fruit and may be sulfured sufficiently to retain a characteristic color.

§ 52.5842 Moisture.

Federal inspection certificates shall indicate the moisture content of the finished product which shall be not more than 26 percent by weight.

§ 52.5843 Sizes of dried pears.

(a) Federal inspection certificates shall indicate the size or combination of sizes of halved pears found upon examination.

(b) The various sizes of dried pears are as follows:

No 1 Size (Jumbo Size)	1⅞ inches or more in width
No 2 Size (Extra Large Size)	1¾ inches to 1⅞ inches in width
No 3 Size (Large Size)	1½ inches to 1¾ inches in width
No 4 Size (Medium Size)	1¼ inches to 1½ inches in width
No 5 Size (Small Size)	1⅛ inches to 1¼ inches in width

No. 6 Size (Extra Small Size).	Less than 1¼ inches in width

(1) "Width" means the longest measurement obtainable, measured at right angles to a line running from the stem end to the calyx end.

(2) In determining compliance with size requirements listed above, dried pears will be considered as of one size if not more than 10 percent by weight of halves vary from the size range.

GRADES FOR DRIED PEARS

§ 52.5844 U.S. Grade A or U.S. Fancy.

(a) U.S. Grade A or U.S. Fancy dried pears possess similar varietal characteristics; possess a practically uniform, bright typical color characteristic or well-matured pears; and are well shaped. Not more than 5 percent by weight of the fruit may be of a color described in U.S. Grade B or U.S. Choice: and none of the fruit may be of a color described in U.S. Grade C or U.S. Standard.

(b) Not more than a total tolerance of 10 percent by weight may be slabs, immature, or scraps; may be affected by russet or similar discoloration; may be damaged by discoloration, sunburn, hailmarks, limb-rubs, hard end, black end, external stems and calyx cups, scab, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided*, That, not more than two-fifths of the total tolerance, or 4 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than one-tenth of the total tolerance, or 1 percent by weight, may be affected by decay.

§ 52.5845 U.S. Grade B or U.S. Choice.

(a) U.S. Grade B or U.S. Choice dried pears possess similar varietal characteristics; possess a reasonably uniform, bright typical color, characteristic of reasonably well-matured pears; and are reasonably well shaped. Not more than 10 percent by weight of the fruit may be of a color described in U.S. Grade C or U.S. Standard.

(b) Not more than a total tolerance of 15 percent by weight may be slabs, immature, or scraps; may be affected by russet or similar discoloration; may be damaged by discoloration, sunburn, hailmarks, limb-rubs, hard end, black end, external stems and calyx cups, scabs, disease, insect injury, or other similar defects; or may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided*, That, not more than one-third of the total tolerance, or 5 percent by weight, may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than one-fifteenth of the total tolerance or 1 percent by weight, may be affected by decay.

§ 52.5846 U.S. Grade C or U.S. Standard.

(a) U.S. Grade C or U.S. Standard dried pears possess similar varietal characteristics; possess a fairly uniform color; characteristic of fairly well-matured pears; and are fairly well shaped.

(b) Not more than a total tolerance of 20 percent by weight may be slabs, immature, or scraps; may be affected by russet or similar discoloration, may be damaged by discoloration, sunburn, hailmarks, limb-rubs, hard end, black end, external stems and calyx cups, scab, disease, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *Provided*, That, not more than one-fourth of the total tolerance, or 5 percent by weight may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than one-tenth of the total tolerance, or 2 percent by weight, may be affected by decay.

§ 52.5847 U.S. Grade D or Substandard.

U.S. Grade D or Substandard dried pears are wholesome and edible fruit that fails to meet the requirements of U.S. Grade C or U.S. Standard: *Provided*, That, not more than 5 percent by weight of the total fruit may be affected by mold, decay, insect infestation (no live insects are permitted), imbedded dirt, or other foreign material: *And further provided*, That, not more than 2 percent by weight of the total fruit may be affected by decay.

EXPLANATION OF TERMS

§ 52.5848 Explanation of terms.

(a) *Color*. (1) "Practically uniform, bright typical color" means that the halves are bright and translucent, and not darker than pear yellow in color.

(2) "Reasonably uniform, bright typical color" means that the halves are reasonably bright and reasonably translucent, and not darker than pear yellow in color.

(3) "Fairly uniform typical color" means that the halves are fairly bright and fairly translucent and are of any normal color not darker than dark amber.

(b) *Damage or other defects*. (1) "Affected by russet or similar discoloration" means reddish brown discoloration caused by sunlight when the area so affected is conspicuous. Russet or other similar skin discoloration is not considered "damaged by discoloration."

(2) "Damage by discoloration" means—

(i) Skin discoloration caused by sunburn, limb-rubs, hailmarks, or other means which when light brown in color, exceed in the aggregate one-eighth of the surface and which, when dark brown or darker, or hard, tough and leathery, exceed in the aggregate an area equivalent to one-sixteenth of the outer surface side of the unit.

(ii) Flesh discoloration caused by bruising, drought spot, or other means which are materially darker or lighter than the normal color of the half and which exceed in the aggregate an area equivalent to one-sixteenth of the outer surface side of the unit.

(iii) Darkening of otherwise sound fruit characteristic of fruit held in storage, in keeping with good commercial practice, shall not be considered as damaged by discoloration unless excessively darkened.

(3) "Damaged by hard end or black end" means the light colored areas at the calyx end of the fruit or similar damage which exceed in the aggregate an area equivalent to one-eighth of the outer surface.

(4) "Damaged by other similar defects" means any injury or defect or group of defects not mentioned herein which materially affect the appearance, edibility, or keeping quality of the fruit.

(5) "Damaged by insect injury" means healed or unhealed surface blemishes, and healed or unhealed blemishes in the flesh which materially affect the appearance, edibility, or keeping quality of the fruit but which do not possess evidence of insect infestation.

(6) "Affected by insect infestation" means that the dried pears show the presence of insects, insect fragments, or excreta. No live insects are permitted.

(7) "Affected by imbedded dirt" means the units have sufficient quantities of adhering dirt to give the fruit a dirty, smudgy appearance and dirt which may not be removed readily in washing the fruit.

(c) *Maturity*. (1) "Well-matured" means that the pears are fully ripe.

(2) "Reasonably well-matured" means that the pears are firm and may not have reached the fully ripe stage.

(3) "Fairly well-matured" means that the pears may be hard but not immature.

(4) "Immature" means that the pears possess a grayish white or dead white color indicative of immature fruit.

(d) *Shape*. (1) "Well-shaped" means that the pears have been cut longitudinally into approximately equal halves, and that the halves are practically whole and symmetrical.

(2) "Reasonably well shaped" means that the pears have been cut longitudinally into approximate equal halves, and that the halves may tend to be oval in shape but are not so irregular as to be misshapen.

(3) "Fairly well shaped" means that the pears have been cut longitudinally into approximately equal halves, and than two-thirds of the apparent original that any portion of a half is not less half.

(e) *Slabs*. "Slabs" are pears that have been mashed or mutilated to the extent that they have lost their normal contour and have become definitely flattened at the edge or rim. A half that has a slightly torn edge is not considered a slab.

(f) *Scraps.* "Scraps" means any portion of a half that is less than two-thirds of the apparent original half.

WORK SHEET

§ 52.5849 Work sheet and summary of requirements for dried pears.

Size of case or package ....
Markings ....
Label or brand ....
Net weight ....
Size or sizes ....
Moisture content ....

	A	B	C	D
	Minimum requirements (percent)			
Color:				
Grade A	95			
Grade B	5	90		
Grade C		10	100	
	Maximum tolerance (percent)			
Defects:				
Total defects	10	15	20	
Slabs, immature, or scraps; affected by russet or similar discoloration; damaged by discoloration; sunburn, hailmarks, limb-rub, hard end, black end, external stems, calyx cups, scab, disease, insect injury, or other similar defects; and	10	15	20	
	But not more than—			
Affected by mold, decay, insect infestation, imbedded dirt, or other foreign material	4	5	5	5
	But not more than—			
Decay	1	1	2	2
Grade				

Subpart—United States Standards for Grades of Frozen Berries

SOURCE: 32 FR 7576, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, TYPES

§ 52.5881 Product description.

Frozen berries are prepared from the properly ripened fresh fruit of the plant (Genus Rubus); are stemmed and cleaned; may be packed with or without packing media; and are frozen and stored at temperatures necessary for the preservation of the product.

§ 52.5882 Types of frozen berries.

(a) Blackberries.
(b) Boysenberries.
(c) Dewberries.
(d) Loganberries.
(e) Youngberries.
(f) Other similar types, such as "Nectaberries."

GRADES OF FROZEN BERRIES

§ 52.5883 Grades of frozen berries.

(a) U.S. Grade A or U.S. Fancy frozen berries are berries of similar varietal characteristics which possess a practically uniform typical color; are practically free from defects; possess a good character; possess a normal flavor and odor; and score not less than 85 points when scored in accordance with the scoring system outlined herein.

(b) U.S. Grade B or U.S. Choice frozen berries are berries of similar varietal characteristics which possess a reasonably uniform typical color; are reasonably free from defects; possess a reasonably good character; possess a normal flavor and odor; and score not less than 70 points when scored in accordance with the scoring system outlined herein.

(c) U.S. Grade D or Substandard frozen berries are berries that fail to meet the requirements of U.S. Grade B or U.S. Choice.

GRADES OF FROZEN BERRIES FOR MANUFACTURING

§ 52.5884 Grades of frozen berries for manufacturing.

(a) U.S. Grade A for Manufacturing or U.S. Fancy Grade for Manufacturing frozen berries are berries of similar varietal characteristics which possess a practically uniform typical color; possess a reasonably good character; possess a normal flavor and odor; and there may be present—

(1) Not more than 4 sepal-like bracts per 16 ounces of net weight;

(2) Not more than one stem or one leaf or a piece of leaf or the approximate equivalent of one full cap per 48 ounces of net weight; and

(3) Not more than 5 percent by weight of berries that may be undeveloped or damaged.

(b) U.S. Grade B for Manufacturing or U.S. Choice Grade for Manufacturing frozen berries are berries of similar varietal characteristics which possess a reasonably uniform typical color; may possess a fairly good character typical of fairly well-ripened to very ripe berries with not more than 30 percent by weight for blackberries and not more than 40 percent by weight for boysenberries, dewberries, loganberries, youngberries, and other similar types that may be crushed; possess a normal flavor and odor; and there may be present—

(1) Not more than 10 sepal-like bracts per 16 ounces of net weight;

(2) Not more than one stem or one leaf or a piece of leaf or the approximate equivalent of one full cap per 16 ounces of net weight; and

(3) Not more than 10 percent by weight of berries that may be undeveloped or damaged.

(c) U.S. Grade D for Manufacturing or Substandard for Manufacturing frozen berries are berries that fail to meet the requirements of U.S. Grade B for Manufacturing or U.S. Choice Grade for Manufacturing.

TYPES OF PACK

§ 52.5885 Types of pack.

(a) Frozen berries are often packed with added sugar or added sugar and water. Sugar packs are usually designated by the amount of fruit to sugar; for example, "6 + 1" means that at the time of packing, 1 pound of sugar was added to 6 pounds of berries.

(b) It is recommended that the quantity of liquid packing medium, if used, is not in excess of the amount normally required by good commercial practice.

FACTORS OF QUALITY

§ 52.5886 Ascertaining the grade.

(a) The grade of frozen berries is determined immediately after thawing to the extent that the units may be separated easily.

(b) "Normal flavor and odor" means that the berries are free from objectionable or off flavors or objectionable odors of any kind.

(c) The grade of frozen berries may be ascertained by considering in addition to the foregoing requirements, the following factors: Color, absence of defects, and character.

(d) The relative importance of each factor has been expressed numerically on a scale of 100. The maximum number of points that may be given for each factor is:

Factors	Points
Color	30
Absence of defects	40
Character	30
Total Score	100

§ 52.5887 Ascertaining the rating of each factor.

The essential variations within each factor are so described that the value may be ascertained for each factor and expressed numerically. The numerical ranges within each factor are inclusive. For example, the range 25 to 30 means 25, 26, 27, 28, 29, and 30.

§ 52.5888 Color.

(a) *(A) classification.* To receive a score of 25 to 30 points the frozen berries must possess a practically uniform typical color. "Practically uniform typical color" means that not more than a total of 10 percent by weight of the berries may vary markedly from the intensity and luster of the characteristic color of well-ripened berries, provided not more than 5 percent by weight of the berries vary markedly from the intensity and luster of the characteristic color of reasonably well-ripened berries.

(b) *(B) classification.* If the frozen berries possess a reasonably uniform typical color, a score of 21 to 24 points may be given. Frozen berries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product. "Reasonably uniform typical color" means that not more than 15 percent by weight of the berries may vary markedly from the intensity and luster of the characteristic color of reasonably well-ripened berries, provided not more than 5 percent by weight of the berries are definitely off color for any reason.

(c) *(D) classification.* Frozen berries that fail to meet the requirements of paragraph (b) of this section or that are definitely off color for any reason may be given a score of 0 to 20 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product.

(d) The evaluation of the score points for the factor of color may be determined from the following table which denotes the variation in color allowed for the score indicated:

Classification	Score points	Maximum (by weight)		
		Marked variation from color of well-ripened berries	Marked variation from color of reasonably well-ripened berries	Definitely off color for any reason
A	30	None		None
	29	2% including not more than 1%		
	28	4% including not more than 2%		
	27	6% including not more than 3%		
	26	8% including not more than 4%		
	25	10% including not more than 5%		
B	24		6% including not more than 1%	
	23		9% including not more than 2%	
	22		12% including not more than 3%	
	21		15% including not more than 5%	
D	20 or less	More than allowances permitted in (B) classification		

§ 52.5889 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from harmless extraneous vegetable material; from leaves, pieces of leaves, stems, and caps; from undeveloped berries; and from berries damaged by blemishes, insect, pathological, or other similar injury.

(b) *Definitions of defects.* (1) A berry is considered "undeveloped" if it is shriveled or if more than one-fourth of the berry possesses hard, undeveloped drupelets.

(2) "Damage" includes any surface blemish having an aggregate area exceeding that of a circle ¼ inch in diameter or any noticeable blemish that extends into the fruit tissue.

(c) *(A) classification.* To receive a score of 34 to 40 points the frozen berries must be practically free from defects. "Practically free from defects" means that there may be present not more than 2 sepal-like bracts per 16 ounces of net weight; not more than one stem or one leaf or piece of leaf or the approximate equivalent of one full cap per 48 ounces of net weight; and that not more than 5 percent by weight of berries may be undeveloped or damaged.

(d) (*B*) *classification.* If the frozen berries are reasonably free from defects, a score of 28 to 33 points may be given. Frozen berries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product. "Reasonably free from defects" means that there may be present not more than 5 sepal-like bracts and not more than one stem or one leaf or piece of leaf or the approximate equivalent of one full cap per 16 ounces of net weight; and that not more than 10 percent by weight of berries may be undeveloped or damaged.

(e) (*D*) *classification.* Frozen berries that fail to meet the requirements of paragraph (d) of this section may be given a score of zero to 27 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product.

(f) The evaluation of the score for the factor of absence of defects may be determined from the following table which denotes the maximum allowance for each type of defect for the score indicated:

Classification	Score points	Harmless extraneous material: Sepal-like bracts	Harmless extraneous material: Leaves, stems, full caps	Undeveloped or damaged berries
		Maximum: Per 16 ozs net weight	Maximum: Per 48 ozs net weight	Maximum: Percent (by count)
A	40	0	None	0
	39	1	None	1
	38	1	1	2
	37	1	1	3
	36	2	1	3
	35	2	1	4
	34	2	1	5
B	33	[2]3	[2]None	6
	32	[2]3	[2]1	6
	31	[2]4	[2]1	7
	30	[2]4	[2]1	8
	29	[2]5	[2]1	9
	28	[2]5	[2]1	10
D	27 or less	(1)	(1)	(1)

[1] More than allowances permitted in B Classification.

[2] Per 16 ounces net weight.

§ 52.5890 Character.

(a) *General.* The factor of character refers to the maturity, texture, and appearance, as well as to the degree of disintegration of the berries. A berry is considered "crushed" if more than 50 percent of the drupelets are crushed, broken, or detached, or if the normal shape of the berry is otherwise materially affected or destroyed.

(b) (*A*) *classification.* To receive a score of 26 to 30 points the frozen berries must possess a good character. "Good character" means that the berries are mature and ripe but not overripe, are fleshy and tender, and are practically intact; that the berries and accompanying liquor are practically free from detached seed cells; and that not more than 5 percent by weight of blackberries may be crushed and not more than 10 percent by weight of dewberries, boysenberries, loganberries, youngberries, or other similar types may be crushed.

(c) (*B*) *classification.* If the frozen berries possess a reasonably good character, a score of 21 to 25 points may be given. Frozen berries that fall into this classification shall not be graded above U.S. Grade B or U.S. Choice, regardless of the total score for the product. "Reasonably good character" means that the berries are reasonably mature and may be not more than slightly immature nor slightly overmature; that the berries may be not more than slightly lacking in fleshy texture; that the berries and any accompanying liquor are reasonably free from detached seed cells; and that not more than 15 percent by weight of blackberries may be crushed and not more than 20 percent by weight of dewberries, boysenberries, loganberries, youngberries, or other similar types may be crushed.

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Classification	Score points	Maturity and texture	Detached seed cells	Maximum percent (by weight)	
				Black-berries	Crushed dewberries, boysenberries, loganberries, youngberries, and other similar types
A	30	Ripe but not over-ripe; fleshy and tender.	Berries and accompanying liquor-practically free.	1	2
	29			2	4
	28			3	6
	27			4	8
	26			5	10
B	25	Not more than slightly immature nor slightly overmature; not more than slightly lacking in fleshy texture.	Berries and accompanying liquor-reasonably free.	7	12
	24			9	14
	23			11	16
	22			13	18
	21			15	20
D	20 or less	(¹)	(¹)	(¹)	

¹ More than allowances permitted in B Classification

(d) (*D*) *classification:* Frozen berries that fail to meet the requirements of paragraph (c) of this section may be given a score of zero to 20 points and shall not be graded above U.S. Grade D or Substandard, regardless of the total score for the product.

(e) The evaluation of the score for character may be determined from the preceding table which denotes the maximum allowances for berries that are crushed.

Lot Compliance

§ 52.5891 Ascertaining the grade of a lot.

The grade of a lot of frozen berries covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.87).

Score Sheet

§ 52.5892 Score sheet for frozen berries.

No. size and kind of container
Label: Style of pack: Fruit-sugar ratio (if shown)

Container mark or identification	Container or sample cases

Net weight (ounces)
Type

Container mark or identification	Container or sample cases

Factors			Score points
Color	30	(A)	25-30
		(B)	¹ 21-24
		(SStd)	¹ 0-20
Absence defects	40	(A)	34-40
		(B)	¹ 28-33
		(SStd)	¹ 0-27
Character	30	(A)	26-30
		(B)	¹ 21-25
		(SStd)	¹ 0-20
Total score	100		

Normal flavor and odor
Grade

¹ Limiting rule.

Subpart—United States Standards for Grades of Table Maple Sirup

SOURCE: 44 FR 72573, Dec. 14, 1979, unless otherwise noted. Redesignated at 46 FR 63203, Dec. 31, 1981.

§ 52.5961 Product description.

(a) *"Maple sirup"* means maple sirup represented as defined in the Standards of Identity for Maple Sirup (21 CFR 168.140) issued under the Federal Food, Drug, and Cosmetic Act. The solids content of the finished maple sirup shall be not less than 66 percent by weight (Brix).

(b) Federal inspection certificates shall limit "U.S. Grade B" maple sirup to a quality suitable for reprocessing only. "U.S. Grade B" maple sirup shall be considered unsuitable for consumer labeling.

§ 52.5962 Grades.

(a) *"U.S. Grade A"* is the quality of maple sirup that:

(1) Has good color;

(2) Has good flavor and odor;

(3) Is practically free from defects; and

(4) Is practically clear.

(b) *"U.S. Grade B for Reprocessing"* is the quality of maple sirup that:

(1) Has fairly good color;

(2) Has fairly good flavor and odor;

(3) Is fairly free from defects;

(4) Is fairly clear; and

(5) Is suitably designated or labeled as a reprocessing grade to qualify for Federal grading, inspection, or certification. Reprocessing grade maple sirup shall not be packaged in consumer size containers.

(c) *"Substandard"* is the quality of maple sirup that fails to meet the requirements for U.S. Grade B for Reprocessing.

§ 52.5963 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be filled with sirup as full as practicable and that the product occupy not less than 90 percent of the volume of the container.

§ 52.5964 Color.

(a) *General.* Color has reference to the color of maple sirup when examined by means of the USDA permanent glass color standards for maple sirup.

(b) *Availability of color standards.* The color standards referred to in this section are available only from the approved supplier under a license from the U.S. Department of Agriculture: Phoenix Precision Instrument Division, The Virtis Company, Inc., Route 208, Gardiner, New York 12525.

§ 52.5965 Classification of requirements.

(a) *"A" classification*—(1) *"Good color"* means that the sirup color is bright and typical of maple sirup prepared from sound, properly gathered sap; and, in addition, meets the following spectral requirements:

(i) *U.S. Grade A Light Amber* is as light, or lighter, in color than the USDA Light Amber Glass Color Standard.

(ii) *U.S. Grade A Medium Amber* is darker in color than Light Amber, but is no darker than the USDA Medium Amber Glass Color Standard.

(iii) *U.S. Grade A Dark Amber* is darker in color than Medium Amber, but is no darker than the USDA Dark Amber Glass Color Standard.

(2) The sirups shall have a good maple flavor characteristic of the color; shall be clean; practically clear; practically free from damage; and shall be free from serious damage.

(b) *"B" classification*—(1) *"Fairly good color"* means that the sirup color is darker in color than the USDA Dark Amber Glass Color Standard, but is not off-color for any reason.

(2) The sirup has fairly good characteristic maple flavor; is fairly free from damage; is fairly clear; and is free from serious damage.

(c) *Substandard classification.* Maple sirup that fails to meet the requirements of paragraph (b) of this section shall not be graded above Substandard.

§ 52.5966 Explanations of terms.

(a) *"Cloudiness"* means the presence, in suspension, of fine particles of mineral matter, such as malate of lime, "niter," "sugar sand," calcium malate, or other substances that detract from the clearness of the sirup.

(b) *"Clean"* means that the sirup shall be practically free from foreign material such as pieces of bark, soot, dust, or dirt.

(c) *"Damage"* means any defect that materially affects the appearance, edibility, or shipping quality of the sirup.

(d) *"Serious damage"* means any defect that seriously affects the edibility or market value of the sirup. Badly scorched sirup, buddy sirup, fermented sirup, or sirup that has any distasteful foreign flavor or disagreeable odor shall be considered as seriously damaged.

(e) *"Buddy flavor, buddiness"* is an unpleasant flavor characteristic of sirup made from sap collected from maple trees as they come out of dormancy.

(f) *"U.S. Department of Agriculture Color Standards"* means the official U.S. Department of Agriculture Permanent Glass Color Standards for Maple Sirup.

§ 52.5967 Determining the grade of a lot.

The grade of a lot of maple sirup covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (7 CFR 52.1 through 52.83); *Provided*, That:

(a) When certifying the color of a sample that has been officially drawn and which represents a specific lot of maple sirup, the lot shall be considered as being of one color if the number of color deviants does not exceed the acceptance number in the appropriate sampling plan. Any lot of maple sirup in which the number of color deviants exceeds the acceptance number shall be designated as a lot of "mixed color."

(b) No deviants for "serious damage" shall be allowed in grades above Substandard.

Subpart—United States Standards for Grades of Canned Succotash

SOURCE: 32 FR 7580, May 24, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, GRADES

§ 52.6001 Product description.

Canned succotash is composed of cream-style or whole-grain corn and lima beans or snap beans, with or without tomatoes; may be packed with the addition of water, with or without the addition of sugar or salt; and is sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

§ 52.6002 U.S. Grade A or U.S. Fancy.

U.S. Grade A or U.S. Fancy canned succotash consists of cream-style or whole-grain sweet corn and lima or snap beans, which meet the requirements of U.S. Grade A or U.S. Fancy, for the respective canned or frozen commodities. If tomatoes are an ingredient, they must meet the requirements of U.S. Grade A canned tomatoes for color and absence of defects.

§ 52.6003 U.S. Grade B or U.S. Extra Standard.

U.S. Grade B or U.S. Extra Standard canned succotash consists of cream-style or whole-grained sweet corn and lima or snap beans which meet the requirements of U.S. Grade B or U.S. Extra Standard for the respective canned or frozen commodities. If tomatoes are an ingredient, they must meet the requirements of U.S. Grade B canned tomatoes for color and absence of defects.

§ 52.6004 U.S. Grade C or U.S. Standard.

U.S. Grade C or U.S. Standard canned succotash consists of cream-style or whole-grain sweet corn and lima or snap beans which meet the requirements of U.S. Grade C or U.S. Standard for the respective canned or frozen commodities. If tomatoes are an ingredient, they must meet the requirements of U.S. Grade C canned tomatoes for color and absence of defects.

§ 52.6005 Grade D or Substandard.

Grade D or Substandard canned succotash is succotash that fails to meet the requirements of U.S. Grade C or U.S. Standard.

PROPORTION OF INGREDIENTS

§ 52.6006 Proportion of ingredients.

(a) Federal certificates of grade shall indicate the approximate percentage of ingredients found upon examination. If whole-grain style corn is an ingredient, the percentage of ingredients shall be based on drained weight; otherwise, the percentage of ingredients shall be based on net weight.

(b) The following mixtures of vegetables in canned succotash shall conform with the proportions indicated in Table No. I:

Cream-style corn and snap beans.

Cream-style corn and lima beans (fresh or frozen).

Cream-style corn and lima beans (dry, "soaked").

Cream-style corn, snap beans, and tomatoes.

Cream-style corn, lima beans (fresh or frozen), and tomatoes.

Cream-style corn, lima beans (dry, "soaked"), and tomatoes.

Whole-grain corn and snap beans.

Whole-grain corn and lima beans (fresh or frozen).

Whole-grain corn and lima beans (dry, "soaked").

Whole-grain corn, snap beans, and tomatoes.

Whole-grain corn, lima beans (fresh or frozen), and tomatoes.

Whole-grain corn, lima beans (dry, "soaked"), and tomatoes.

TABLE NO. I

	Proportion by weight (percent)	
	Not less than—	Not more than—
Corn	50	87½
Snap beans	25	50
Lima beans, fresh	12½	30
Lima beans, dry "soaked"	12½	30
Tomatoes	10	30

FILL OF CONTAINER, DRAINED WEIGHT METHOD

§ 52.6007 Recommended fill of container.

The container shall be filled with succotash as full as practicable without impairment of quality. The product and packing medium shall occupy not less than 90 percent of the total volume capacity of the container.

§ 52.6008 Method for ascertaining drained weight.

Drained weights of canned succotash containing whole-grain corn are determined by emptying the contents of the container upon a circular sieve of proper diameter, containing eight meshes to the inch (0.097-inch perforations) and allowing to drain for 2 minutes. A sieve 8 inches in diameter is used for No. 2½ cans and smaller, and a sieve 12 inches in diameter is used for No. 10 cans.

WORK SHEET

§ 52.6009 Work sheet for canned succotash.

No. Size and kind of container ……………………………………

Label ……………………………………

Container mark or identification	Cans/glass Cases		Average

Net weight (ounces) ……………………………………

Vacuum (inches) ……………………………………

Drained weight (ounces) ……………………………………

Percent of each:

- Corn (cream style) ……………………………………
- Corn (whole kernel) ……………………………………
- Snap beans ……………………………………
- Lima beans (green) ……………………………………
- Lima beans (soaked) ……………………………………
- Tomatoes ……………………………………

Container mark or identification	Cans/glass Cases		Average
Grade of each:			
Corn (cream style)			
Corn (whole kernel)			
Snap beans			
Lima beans (green)			
Lima beans (soaked)			
Tomatoes (color and defects)			
Grade			

Subpart—United States Standards for Grades of Refiners' Sirup

SOURCE: 32 FR 8575, June 15, 1967, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

GENERAL

§ 52.6041 Definition.

"Refiners' sirup" means a liquid product obtained from the refining of cane or beet sugar. The total soluble nonsugar solids content of refiners' sirup exceeds 6 percent of the total soluble solids. All of the sirup constituents have been subjected to the processes of clarification and decolorization, or equivalent purification, and it may be partially or wholly inverted.

GRADES

§ 52.6042 Grades for refiners' sirup.

The grades for refiners' sirup are designated as follows:

(a) "U.S. Fancy" or "U.S. Grade A" Refiners' Sirup.

(b) "U.S. Choice" or "U.S. Grade B" Refiners' Sirup.

(c) "U.S. Extra Standard" or "U.S. Grade C" Refiners' Sirup.

(d) "U.S. Standard" or "U.S. Grade D" Refiners' Sirup.

(e) "U.S. Substandard" or "U.S. Grade E" Refiners' Sirup.

§ 52.6043 Grade specifications.

Specifications for each grade of refiners' sirup are as follows:

(a) U.S. Fancy or U.S. Grade A Refiners' Sirup consists of refiners' sirup which possesses a flavor characteristic of refiners' sirup of fancy quality; which contains no sediment; which is free of foreign matter; which has a Brix solids content of not less than 72 percent when corrected to 20° C. (68° F.); which has a ratio of total sugars (sucrose plus reducing sugars) to Brix solids of not less than 92 percent; which has a ratio of sulfated ash to Brix solids of not more than 3.0 percent; and which possesses a color no darker than RS Color Standard No. 1.

(b) U.S. Choice or U.S. Grade B Refiners' Sirup consists of refiners' sirup which possesses a flavor characteristic of refiners' sirup of choice quality; which contains no sediment; which is free of foreign matter; which has a Brix solids content of not less than 72 percent when corrected to 20° C. (68° F.); which has a ratio of total sugars (sucrose plus reducing sugars) to Brix solids of not less than 86 percent; which has a ratio of sulfated ash to Brix solids of not more than 6 percent; and which possesses a color no darker than RS Color Standard No. 2.

(c) U.S. Extra Standard or U.S. Grade C Refiners' Sirup consists of refiners' sirup which possess a flavor characteristic of refiners' sirup of standard quality; which contains no excess of sediment; which is practically free of foreign matter; which has a Brix solids content of not less than 76 percent when corrected to 20° C. (68° F.); which has a ratio of total sugars (sucrose plus reducing sugars) to Brix solids of not less than 78 percent; which has a ratio of sulfated ash to Brix solids of not more than 10 percent; and which possesses a color no darker than RS Color Standard No. 3.

(d) U.S. Standard or U.S. Grade D Refiners' Sirup consists of refiners' sirup which possesses a flavor characteristic of refiners' sirup of standard quality; which contains no excess of sediment; which is practically free of foreign matter; which has a Brix solids content of not less than 76 percent when corrected to 20° C. (68° F.); which has a ratio of total sugars (sucrose plus reducing sugars) to Brix solids of not less than 70 percent; and which has a ratio of sulfated ash to Brix solids of not more than 14 percent.

(e) U.S. Substandard or U.S. Grade E Refiners' Sirup consists of refiners' sirup that fails to meet the specifications for U.S. Standard Refiners' Sirup.

(f) Table of specifications for grades. The specifications for the designated grades of refiners' sirup are set forth in summary form in Table I of this paragraph.

TABLE I—TABLE OF SPECIFICATIONS FOR GRADES

Factors	Grades and specifications			
	U.S. fancy or U.S. grade A refiners' sirup	U.S. choice or U.S. grade B refiners' sirup	U.S. extra std. or U.S. grade C refiners' sirup	U.S. standard or U.S. grade D refiners' sirup
Brix solids corrected to 20° C. (68° F.).	Not less than 72 percent.	Not less than 72 percent.	Not less than 76 percent.	Not less than 76 percent.
Ratio of total sugars (sucrose plus reducing sugars) to Brix solids.	Not less than 92 percent.	Not less than 86 percent.	Not less than 78 percent.	Not less than 70 percent.
Ratio of sulfated ash to Brix solids.	Not more than 3 percent.	Not more than 6 percent.	Not more than 10 percent.	Not more than 14 percent.
Color	No darker than RS color standard No. 1.	No darker than RS color standard No. 2.	No darker than RS color standard No. 3.	No color limit.

(g) Tolerances for certification of officially drawn samples. When certifying samples that have been officially drawn and which represent a specific lot of refiners' sirup, the grade for such lot will be determined by averaging the factors of all the samples representing the lot: *Provided*, That not more than ⅙ of such samples fail to meet the requirements of the grade specifications set forth in Table I: *And further provided*, That each of the samples which represent a specific lot of refiners' sirup meet the limiting specifications set forth in Table II of this paragraph.

TABLE II—TABLE OF LIMITING SPECIFICATIONS FOR REFINERS' SIRUP

Factors	Grades and specifications			
	U.S. fancy or U.S. grade A refiners' sirup	U.S. choice or U.S. grade B refiners' sirup	U.S. extra standard or U.S. grade C refiners' sirup	U.S. standard or U.S. grade D refiners' sirup
Ratio of total sugars (sucrose plus reducing sugars) to Brix solids.	Not less than 91 percent.	Not less than 85 percent.	Not less than 77 percent.	Not less than 69 percent.
Ratio of sulfated ash to Brix solids	Not more than 3.5 percent.	Not more than 6.5 percent.	Not more than 11 percent.	Not more than 15 percent.
Color	No darker than RS color standard No. 2.	No darker than RS color standard No. 3.	Darker than RS color standard No. 3.	Darker than RS color standard No. 3.

DETERMINATION OF FACTORS

§ 52.6044 Quantitative determination of factors.

Quantitative determination of the respective factors other than color is made by the methods set forth in this section for the respective factors:[1]

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[1] These methods are described in Official Methods of Analysis of the Association of

Continued

(a) *Brix solids.* By Brix hydrometer, correcting to 20° C. (68° F.), using the double dilution method.

(b) *Total sugars*—(1) *Sucrose.* By the chemical method, using invertase as the inverting agent; the Lane-Eynon volumetric method for reducing sugars before and after inversion; or by Jackson-Gillis double polarization method number IV.

(2) *Reducing sugar.* By the Lane-Eynon volumetric method, or by the Munson-Walker gravimetric method.

(c) *Sulfated ash.* By the sulfation method, with no deduction.

§ 52.6045 Preparation of basic solutions and RS color standards.

Chemicals of reagent grade, at room temperature, are used in the preparation of the solutions described in this section.

(a) *Preparation of basic solutions*—(1) *Solution A.* Dissolve 10 grams of $CuCl_2 \cdot 2H_2O$ in a sufficient quantity of 10 percent hydrochloric acid solution to make 100 milliliters.[2]

(2) *Solution B.* Dissolve 50 grams of $CoCl_2 \cdot 6H_2O$ in a sufficient quantity of 10 percent hydrochloric acid solution to make 500 milliliters.

(3) *Solution C.* Dissolve 50 grams of $FeCl_3 \cdot 6H_2O$ in a sufficient quantity of 10 percent hydrochloric acid solution to make 500 milliliters.

(4) *RS stock solution.* Mix 50 milliliters of Solution A and 485 milliliters of Solution B with 465 milliliters of Solution C.

(b) *Preparation of RS color standards*—(1) *RS Color Standard No. 1.* Dilute 10 milliliters of the RS stock solution to 100 milliliters with 10 percent hydrochloric acid solution.

(2) *RS Color Standard No. 2.* Dilute 18 milliliters of the RS stock solution to 100 milliliters with 10 percent hydrochloric acid solution.

(3) *RS Color Standard No. 3.* Dilute 50 milliliters of RS stock solution to 100 milliliters with 10 percent hydrochloric acid solution.

§ 52.6046 Use of RS color standards in determining color factor.

(a) *Containers required.* The containers needed to perform the visual color comparison test set forth in paragraph (c) of this section are:

(1) A container for a sample of refiners' sirup for which the color factor is to be determined (such container hereinafter called "sample container"); and

(2) Containers for the respective RS color standards.

(b) *Description of containers.* The sample container is made of colorless and transparent glass or plastic material and is of such shape and construction as to provide a flat ⅛-inch thickness of the sample to be viewed. The container for each RS color standard is a colorless and transparent 2-ounce French square water sample bottle having outside base dimensions of 1 7/16 inches by 1 7/16 inches.

(c) *Visual comparison test.* A sample of refiners' sirup is compared in the following manner with the RS color standards to determine whether the sample is darker than one or more of such color standards:

(1) Place each of the RS Color Standards Nos. 1, 2, and 3 in separate 2-ounce French square water sample bottles;

(2) Place a sample of the refiners' sirup in a sample container; and

(3) In order to determine whether the sample is darker than one or more of the RS color standards, visually compare the sample with each of the color standards by looking through them at a light-colored background in diffuse light. The sample is viewed through its ⅛-inch thickness; and each RS color standard is viewed at right angles to one of the sides of its container.

Subpart—United States Standards for Grades of Canned Leafy Greens

SOURCE: 33 FR 5741, Apr. 13, 1968, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Official Agricultural Chemists, Seventh Edition, 1950, except the Jackson-Gillis double polarization method number IV is described in Circular C440, Nat. Bur. Standards, May 1942, or in the Sugar Analysis, by Browne and Zerban, 3d Edition, 1948, John Wiley & Sons, Inc.

[2] Ten percent hydrochloric acid solution is prepared by diluting 242.6 milliliters of reagent grade hydrochloric acid to one liter.

PRODUCT DESCRIPTION

§ 52.6081 Product description.

(a) "Canned Leafy Greens" (other than spinach), means the product properly prepared from the succulent leaves of any one of the plants listed under § 52.6082 "Types" and packed with the addition of water in hermetically sealed containers and sufficiently processed by heat to prevent spoilage. The products may be acidified and/or seasoned with one or more of the acidifying or seasoning ingredients and in a quantity permitted under the Federal Food, Drug, and Cosmetic Act.

TYPES, STYLES, AND GRADES

§ 52.6082 Types.

(a) The following types are defined under the Standards of Identity for Canned Vegetables (20 CFR 51.990) issued pursuant to the Federal Food, Drug, and Cosmetic Act:

(1) Collards.

(2) Kale.

(3) Mustard greens.

(4) Turnip greens.

(b) Other types included in this subpart, but not covered by the Standards of Identity for Canned Vegetables are:

(1) Mixed leafy greens—consists of a substantial mixture of any two of the types listed in paragraph (a) of this section.

(2) Poke salad—consists of leaves and adjoining stem of the pokeberry plant (phytolocca Americana).

§ 52.6083 Styles.

(a) "Whole leaf" consists substantially of the whole leaf and adjoining portion of stem.

(b) "Cut" or "sliced" consists of the leaves and adjoining portion of stem that has been cut predominantly into large pieces approximating ¾ inch or more in the longest dimension or cut predominantly into approximate strips.

(c) "Chopped" consists of the leaves and adjoining portions of the stem that have been cut predominantly into small pieces less than approximately ¾ inch in the longest dimension.

§ 52.6084 Grades.

(a) "U.S. Grade A" (or "U.S. Fancy") is the quality of the product that has a good flavor and odor characteristic of the type and has an attractive appearance and eating quality within the limitations as specified in the subpart with respect to: (1) Color; (2) character; (3) damage; and (4) harmless extraneous material.

(b) "U.S. Grade B" (or "U.S. Extra Standard") is the quality of the product that has a good flavor and odor characteristic of the type and has a reasonably attractive appearance and eating quality within the limitations as specified in the subpart with respect to: (1) Color; (2) character; (3) damage; and (4) harmless extraneous material.

(c) "Substandard" is the quality of the product that fails to meet the requirements for "U.S. Grade B."

DEFINITIONS OF TERMS AND SYMBOLS

§ 52.6085 Definitions of terms and symbols.

(a) *Terms.*

Defect	Any specifically defined variation from a particular requirement.
Deviant	A sample unit that exceeds an upper limit (such as for various defect classifications) or fails to meet a lower limit (such as drained weights).
Sample	Any number of sample units to be used for inspection of a lot.
Sample unit	The entire contents of a container, a portion of the contents of a container or a combination of the contents of two or more containers as specified to be used for inspection.
Sample average value	The numerical value calculated by dividing the total number of applicable defects in a sample by the total number of sample units in that sample.

(b) *Symbols.*

X_d	Minimum sample average drained weight.
LL	Lower limit for individual drained weights.
UL	Upper limit is the value which represents the maximum number of defects a sample unit may have for a grade classification.

FILL OF CONTAINER

§ 52.6086 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. The recommended fill of container for canned leafy greens is the maximum amount of product that can be sealed in a container and processed by heat to a point of proper sterilization without impairment of quality. It is recommended that the product and packing medium occupy not less than 90 percent of the water capacity of the container.

RECOMMENDED DRAINED WEIGHTS

§ 52.6087 Recommended drained weights.

(a) *General.* The recommended drained weight values in Table I of this subpart are not incorporated in the grades of the finished product, since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Method for ascertaining drained weight.* (1) The drained weight of canned leafy greens is determined when the product is at approximately room temperature (68° F.). The contents of the containers are emptied upon a dry, previously weighed U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937, ±3 percent, square openings). With the sieve flat on the tray, the container of product is placed open end down in the sieve in an upright position. The container is lifted off the product without spreading the product out on the sieve. The product is allowed to drain for exactly two minutes. The weight of the product and sieve minus the weight of the dry sieve is the drained weight of the product.

(2) A sieve 8 inches in diameter is used for the equivalent of a No. 3 size can (404 x 700) and smaller and a sieve 12 inches in diameter is used for containers larger than the equivalent of a No. 3 size can.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS FOR CANNED LEAFY GREENS

Container designation (metal, unless otherwise stated)	Container size overall dimensions		Capacity—weight H_2O at 68 F. (avoirdupois ounces)	Minimum drained weight (avoirdupois ounces)	
	Diameter (inches)	Height (inches)		LL	X_4
8Z tall	2 11/16	3 4/16	8.65	4.8	5.2
No. 1 picnic	2 11/16	4	10.90	6.3	6.8
No. 300	3	4 7/16	15.20	8.6	9.1
No. 1 tall	3 1/16	4 11/16	16.60	9.4	10.0
No. 303	3 3/16	4 6/16	16.85	9.6	10.2
No. 303 glass			17.75	9.4	10.0
No. 2	3 7/16	4 9/16	20.50	11.9	12.6
No. 2½	4 1/16	4 11/16	29.75	17.6	18.6
No. 2½ glass			29.50	15.8	16.6
No. 10	6 3/16	7	109.45	54.7	58.4

FACTORS OF QUALITY AND SAMPLE UNIT SIZE

§ 52.6088 Factors of quality.

The grade of a lot of canned leafy greens is based on requirements for product characteristics with respect to the following quality factors:

(a) Flavor and odor.

(b) Color.

(c) Character.

(d) Damage.

(e) Harmless extraneous material.

[36 FR 8557, May 8, 1971. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.6089 Sample unit size.

(a) Compliance with the factors of flavor and odor, color, and character may be determined on: (1) The contents of an entire container, or (2) a representative subsample from containers yielding more than 10 ounces of drained weight.

(b) Compliance with requirements for harmless extraneous material other than plant material is determined on the contents of an entire container.

(c) Compliance with requirements for the factors of damage and extraneous plant material shall be determined on subsamples as specified on Table II of this subpart.

TABLE II—SAMPLE UNIT SIZE

[In ounces]

Style	Drained leafy greens		
	Containers smaller than No. 2½	No. 2½ containers	No. 10 containers
Whole leaf; Cut leaf	10	15	30
Chopped	2	3	6

PRODUCT CHARACTERISTICS

§ 52.6090 Classification of defects.

(a) *General.* Scoreable defects in the factors of color, character, extraneous plant material, other extraneous material, and damaged leafy greens are outlined in Tables III, IV, and V.

(b) *Extraneous plant material.* Extraneous plant material includes root crowns, root stubs, and seed heads of the applicable leafy green plant and harmless grass and weeds of various kinds and texture.

(c) *Other extraneous material.* Other harmless extraneous material includes grit, sand, silt, or other earthy material.

(d) *Damage.* Damage includes discoloration or other similar injury on a leaf or stem or portion thereof which damage affects, materially affects, or seriously affects the appearance or eating quality of the portion of leafy green and/or entire product.

(e) *Degrees of defect classes.* Defects are classified as to minor, major, or severe. Each "X" mark in Tables III, IV, and V represents "one (1) defect."

TABLE III—WHOLE LEAF; CUT LEAF; CHOPPED STYLES

Quality factors	Defects	Minor	Major	Severe
Color	Color appearance is:			
	Adversely affected to a degree that is noticeable		X	
	Adversely affected to a degree that is objectionable			X
Character	Appearance or eating quality, due to: (1) A mushy texture, disintegration, ragged cutting, or shredded leaves and shredded stems, or portions thereof; and/or. (2) A tough texture, coarse, or fibrous stems or portions thereof; and/or. (3) Any other causes, as applicable for the style, is:			
	Adversely, but not seriously, affected		X	
	Seriously affected			X
Extraneous plant material	Root crown: Any significant portion of the solid area of the plant between the root and attached leaves.		X	
	Root stub: Any portion of the root whether or not leaves are attached.			X
	Seed head—Whole leaf; cut leaf styles: Longer than 1 inch or objectionable regardless of length.		X	
	Seed head—Chopped style—pieces affecting appearance or eating quality:			
	More than slightly but not materially	X		
	Materially		X	
	Seriously			X
Other extraneous material	Grit, sand, silt, or other earthy material:			

TABLE III—WHOLE LEAF; CUT LEAF; CHOPPED STYLES—Continued

Quality factors	Defects	Minor	Major	Severe
	A trace that no more than slightly affects appearance or eating quality.		X	
	Presence materially affects appearance or eating quality.			X

TABLE IV

Quality factors	Defects	Minor	Major	Severe
	WHOLE LEAF; CUT LEAF STYLES—Grass and weeds (aggregate measurement)			
Extraneous plant material	(1) Green, fine, tender, stringlike blades, and stems:.			
	3 inches or less	X		
	More than 3 inches but not more than 8 inches		X	
	More than 8 inches			X
	(2) Green and coarse:			
	½ inch or less	X		
	More than ½ inch but not more than 2 inches		X	
	More than 2 inches			X
	(3) Other than green—of any texture or kind:			
	½ inch or less		X	
	More than ½ inch			X
	CHOPPED STYLE—Grass and weeds (aggregate measurement)			
	(1) Green, fine, tender, stringlike blades, and stems:.			
	¾ inch or less	X		
	More than ¾ inch but not more than 2 inches		X	
	More than 2 inches			X
	(2) Green and coarse:			
	¾ inch or less		X	
	More than ¾ inch			X
	(3) Other than green—of any texture or kind:			
	Any amount			X

TABLE V

Quality factors	Defects	Minor	Major	Severe
	WHOLE LEAF; CUT LEAF STYLES—Discoloration or other injury (affecting the appearance or eating quality)			
Damage	Less than 1 square inch that more than slightly but not materially affects.	X		
	Less than 1 square inch that materially affects		X	
	1 square inch or more but less than 4 square inches that affects to any degree.		X	
	More than 4 square inches that affects to any degree.			X
	CHOPPED STYLE			
	Any area that materially affects	X		

[33 FR 5741, Apr. 13, 1968, as amended at 36 FR 8557, May 8, 1971; 38 FR 19958, July 26, 1973. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.6091 Tolerances for defects.

TABLE VI(a)—WHOLE LEAF; CUT LEAF STYLES

For container sizes: Less than No. 2½; sample unit size—10 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
U.S. Grade A	Severe	1	2	0.25
	Major	4	6	1.50
	Total [2]	8	11	4.0
U.S. Grade B	Severe	2	3	0.50
	Major	8	11	4.0
	Total [2]	18	23	12.0

[2] "Total"—the sum of severe, major, and minor defects.

TABLE VI(b)—WHOLE LEAF; CUT LEAF STYLES

For container size: No. 2½; sample unit size—15 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
U.S. Grade A	Severe	1	3	0.375
	Major	5	8	2.25
	Total [2]	10	14	6.0
U.S. Grade B	Severe	2	4	0.75
	Major	10	14	6.0
	Total [2]	26	32	18.0

[2] "Total"—the sum of severe, major, and minor defects.

TABLE VI(c)—WHOLE LEAF; CUT LEAF STYLES

For container size: No. 10; sample unit size—30 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
U.S. Grade A	Severe	2	4	0.75
	Major	8	12	4.5
	Total [2]	18	23	12.0
U.S. Grade B	Severe	4	6	1.5
	Major	18	23	12.0
	Total [2]	47	55	36.0

[2] "Total"—the sum of severe, major, and minor defects.

TABLE VII(a)—CHOPPED STYLE

For container sizes: Less than No. 2½; sample unit size—2 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
U.S. Grade A	Severe	1	2	0.55
	Major	4	6	1.20
	Minor (grass and weeds)	4	7	2.00
	Total [2]	22	27	5.0
U.S. Grade B	Severe	2	3	0.5
	Major	8	11	4.0
	Minor (grass and weeds)	10	14	6.0

TABLE VII(a)—CHOPPED STYLE—Continued

For container sizes: Less than No. 2½; sample unit size—2 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
	Total [3]	51	59	40.0

[3] "Total"—the sum of severe, major, and minor grass and weeds and other minor defects.

TABLE VII(b)—CHOPPED STYLE

For container size: No. 2½; sample unit size—3 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
U.S. Grade A	Severe	1	3	0.37
	Major	5	8	2.25
	Minor (grass and weeds)	6	9	3.0
	Total [3]	31	38	22.5
U.S. Grade B	Severe	2	4	0.75
	Major	10	14	6.0
	Minor (grass and weeds)	14	19	9.0
	Total [3]	74	85	60.0

[3] "Total"—the sum of severe, major, minor grass and weeds and other minor defects.

TABLE VII(c)—CHOPPEL STYLE

For container size: No. 10; sample unit size—6 ozs.		Number of defects permitted in a sample unit		
Grade classification	Defect classification	Upper limit (UL)	Maximum allowed for deviants	Sample average value
U.S. Grade A	Severe	2	4	0.75
	Major	8	12	4.5
	Minor (grass and weeds)	10	14	6.0
	Total [3]	57	66	45.0
U.S. Grade B	Severe	4	6	1.50
	Major	18	23	12.0
	Minor (grass and weeds)	26	32	18.0
	Total [3]	140	153	120.0

[3] "Total"—the sum of severe, major, minor grass and weeds and other minor defects.

LOT ACCEPTANCE

§ 52.6092 Lot acceptance for drained weights.

A lot of canned leafy greens is considered as meeting the minimum drained weight when the following criteria are met:

(a) The average of the drained weights from all the containers in the sample meets the average drained weight in Table I of this subpart (designated as X_d; and

(b) The number of deviants for drained weight do not exceed the applicable acceptance number specified in the single sampling plan in the Regulations Governing Inspection of Processed Fruits, Vegetables, and Related Products (§§ 52.1-52.87).

§ 52.6093 Lot acceptance for quality.

A lot of canned leafy greens shall be considered as meeting the quality requirements for the applicable grade when the following criteria are met:

(a) *Flavor and odor.* All sample units meet the requirements for flavor and odor.

(b) *Defects.* (1) The number of sample units which exceed the upper limit (UL) for these defects for the applicable grade (deviants), specified in Tables VI(a), VI(b), VI(c), VII(a), VII(b), and VII(c), does not exceed the acceptance number specified for the sample size in the Single Sampling Plan of the Regulations Governing Inspection of Processed Fruits, Vegetables, and Related Products (§§ 52.1-52.87); and

(2) The sample average values for the various defect classifications specified in Tables VI(a), VI(b), VI(c), VII(a), VII(b), and VII(c) are not exceeded.

(3) No sample unit exceeds the maximum number of defects allowed for deviants.

SCORE SHEET

§ 52.6094 Score sheet for canned leafy greens.

No., size, kind of container
Label statements
Container mark or identification
  Cans
  Glass
  Cases
Net weight (ounces)
Vacuum (inches) Average
Drained weight (ounces) Do.
Style Do.
Type

Quality factors	Defects						Sample average value
	Sample unit			Sampe unit			
	Minor	Major	Severe	Minor	Major	Severe	
Color							
Character							
Damage							

	Minor	Major	Severe
Harmless extraneous material			
Total (each class)			

Total:
  Minor
  Major
  Severe

Flavor and odor:
  Good
  Objectionable

Subpart—United States Standards for Grades of Canned Peas and Carrots[1]

SOURCE: 35 FR 10093, June 19, 1970, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, KINDS, STYLES, AND GRADES

§ 52.6201 Product description.

Canned peas and carrots is the product which has been properly prepared from clean, sound, succulent garden peas and clean, sound carrots. The peas and carrots are packed in a suitable packing medium with or without the addition of salt, sugar, or other ingredient(s) permissible under the Federal Food, Drug, and Cosmetic Act; and are sufficiently processed by heat to assure preservation of the product in hermetically sealed containers.

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.

§ 52.6202 Kinds, styles, proportions of vegetables.

(a) *Peas.* Sweet type peas shall comprise not less than 50 percent, by weight, of the drained product.

(b) *Carrots.* Not less than 25 percent, by weight, of the drained product shall be carrots and shall be one of the following styles:

(1) *Sliced.* Predominantly of parallel slices which may be in the form of "corrugated," "fluted," "wavy," "scalloped," or "crinkle cut";

(2) *Diced.* Approximate cube-shaped;

(3) *Double-diced.* Approximate rectangular shaped which resemble the equivalent of two cube-shaped units; or

(4) *Strips.* Cut strips not exceeding three-eighth inch in width and of various lengths and which have four approximately parallel sides.

(c) *Determination of proportion of ingredients.* The proportion requirement for the respective ingredient is determined by averaging the total drained weight of each ingredient in all 10-ounce sample units in the sample: *Provided,* That any deviation from the requirement for proportions of ingredients in any one 10-ounce sample unit is within the range of variability of good commercial practice.

§ 52.6203 Grades of canned peas and carrots.

(a) "U.S. Grade A" or ("U.S. Fancy") is the quality of canned peas and carrots in which the vegetables possess a good color, are practically free from defects, possess a good character, possess a good flavor and odor, and which score not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or ("U.S. Extra Standard") is the quality of canned peas and carrots in which the vegetables have at least reasonably good color, reasonable freedom from defects, a reasonably good character, and fairly good flavor and odor, and which score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned peas and carrots that fail to meet the requirements of U.S. Grade B.

FILL OF CONTAINER, DRAINED WEIGHT

§ 52.6204 Fill of container and drained weights.

(a) *General.* The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be as full of peas and carrots as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the volume of the container.

(b) *Method for ascertaining drained weight.* The minimum drained weight recommendations in Table I are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned peas and carrots is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937 inch, ±3 percent, square openings). The product is evenly distributed on the sieve, the sieve inclined slightly to facilitate drainage, and allowed to drain for 2 minutes. The drained weight is the weight of the sieve and the peas and carrots less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2½ size can (401 x 411) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

§ 52.6205 Compliance with recommended minimum drained weights.

Compliance with the recommended minimum drained weights for canned peas and carrots is determined by averaging the drained weights from all the containers which are representative of a specific lot. Such lot is considered as meeting the recommendations if the following criteria are met:

(a) The average of the drained weights from all of the containers meets the recommended drained weight; and

(b) The drained weights from the containers which do not meet the recommended drained weight are within the range of variability for good commercial practice.

TABLE I—RECOMMENDED MINIMUM DRAINED WEIGHTS OF PEAS AND CARROTS

[In ounces]

Container size or designation	If the style of the carrot is—	
	Sliced, strips	Diced, double-diced
8 oz. Tall	5.5	5.5
No. 2 Vacuum ($3\frac{7}{16} \times 3\frac{6}{16}$)	9.5	9.5
No. 303	10.6	10.8
No. 303 (Glass)	10.6	10.8
No. 10	70.0	71.0

SAMPLE UNIT SIZE, FACTORS OF QUALITY

§ 52.6206 Sample unit size.

Compliance with requirements for factors of qulaity and for proportions of ingredients shall be based on a sample unit consisting of 10 ounces of drained product. A sample unit may be comprised of:

(a) The entire contents of a container;

(b) A combination of the contents of two or more containers;

(c) A representative portion of the contents of a container;

Provided, That not more than one (1) sample unit is derived from any one single container smaller than a No. 10 can and that no less than two (2) sample units are derived from any one single container of a No. 10 can size or larger.

§ 52.6207 Ascertaining the grade of a sample unit.

(a) *General.* The grade of a sample unit of canned peas and carrots is ascertained by considering: The flavor and odor which are not scored; the rating of the factors of color, uniformity of size and shape, absence of defects, and character which are scored; the total score; and the limiting rules which may be applicable.

(b) *Definition of flavor and odor.* (1) "Good flavor" means that the product and each of the vegetables has a good, characteristic, normal flavor and odor.

(2) "Fairly good flavor" means that the product may be lacking in good flavor and odor but is free from objectionable flavors and objectionable odors of any kind.

(c) *Factor not rated by score points.*

(1) Flavor and odor.

(d) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
Color	20
Uniformity of size	20
Absence of defects	30
Character	30
Total	100

§ 52.6208 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive. (For example, "18 to 20 points" means 18, 19, or 20 points.)

§ 52.6209 Color.

(a) *General.* The factor of color refers to the overall appearance of the product and to the color and brightness of the vegetables individually.

(b) (*A*) *Classification.* Canned peas and carrots which possess a good color may be given a score of 18 to 20 points. "Good color" means that the product possesses an overall color that is at least reasonably bright and each of the vegetables is not more than slightly affected by variations in color; that the carrots possess an orange-yellow color which is bright and typical and the presence of green, white, or orange-brown units does not more than slightly affect the appearance or eating quality of the carrots; that the color of the peas is normal and is typical of at least reasonably young and reasonably tender peas with practically no "blond" or "cream" colored peas.

(c) (*B*) *Classification.* Canned peas and carrots which possess a reasonably good color may be given a score of 16 or 17 points. Canned peas and carrots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (limiting rule). "Reasonably" good color means that the product possesses an overall color which may be slightly dull but is not off color; that the color of each of the vegetables may be variable but not to the extent that the appearance of the product is seriously affected; that the presence of green, white, or orange-brown units does not seriously affect the appearance of the carrots; that the color of the peas is typical of fairly young and fairly tender peas.

(d) (*SStd*) *Classification.* If the canned peas and carrots fail to meet the requirements of paragraph (c) of this section a score of 0 to 15 points may be given and the product shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

§ 52.6210 Uniformity of size and shape.

(a) *General.* Under this factor, consideration is given only to the uniformity of size and shape of the carrot ingredient. The percentage, by weight, of the carrot ingredient consisting of units smaller, or larger, than the required size for a particular style is determined by separating all such units from the other carrot units in the sample unit, weighing such units, and dividing that weight by the total weight of the drained carrot ingredient in the sample unit.

(b) *Ascertaining dimensions.* Size dimensions of the various units are measured as follows:

(1) *Diameter and thickness of sliced carrots.* The diameter of a slice is the measurement across the largest cut surface of the slice. The thickness of a slice is measured at the thickest portion between the two cut surfaces of the slice.

(2) *Size of diced carrots.* The size of a dice is the length of the edge (other than rounded outer edges) which is most representative of the size of the approximate cube.

(3) *Width of a strip.* The width of a strip is the widest cut surface measured at right angles to the length of the unit.

(c) (*A*) *Classification.* Canned peas and carrots that are practically uniform in size and shape may be given a score of 18 to 20 points. "Practically uniform in size and shape" means that:

(1) The carrots comply with the measurement, shape, and uniformity requirements for (A) classification in Table II; and, in addition

(2) The overall appearance of the product is not materially affected by variations or irregularities in size and shape of the units.

(d) (*B*) *Classification.* Canned peas and carrots that are reasonably uniform in size and shape may be given a score of 16 or 17 points. Canned peas and carrots that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (limiting rule). "Reasonably uniform in size and shape" means that:

(1) The carrots comply with the measurement, shape, and uniformity requirements for (B) classification in Table II; and, in addition

(2) The overall appearance of the product is not seriously affected by variations or irregularities in size and shape of the units.

(e) (*SStd*) *Classification.* Canned peas and carrots that fail to meet the requirements of paragraph (d) of this section may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

TABLE II—UNIFORMITY OF SIZE AND SHAPE REQUIREMENTS FOR CARROT INGREDIENT IN CANNED PEAS AND CARROTS

Styles of carrots	Measurement and/or shape of individual units	(A) Classification maximum variation (percent by weight of carrot ingredient in the sample unit)	(B) Classification maximum variation (percent by weight of carrot ingredient in the sample unit)
Sliced	1½"—maximum diameter; 5/16"—maximum thickness.	15 percent may exceed these measurement limits.	25 percent may exceed these measurement limits.
Diced	Approximate cube shape, 5/16"—minimum; 9/16"—maximum.	20 percent may fail these measurement limits, provided small chips do not materially affect appearance of product.	30 percent may fail these measurement limits, provided small chips do not seriously affect appearance of product.
Double-diced	Approximate double-cube shapes.	20 percent may be noticeably smaller or larger than average sized unit.	30 percent may be noticeably smaller or larger than average sized unit.
Strips	Approximate french-cut shapes, 1½" minimum length, 5/16" maximum width.	25 percent may be less than 1½" in length or exceed 5/16" width.	35 percent may be less than 1½" in length or exceed 5/16" width.

§ 52.6211 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous vegetable material, damaged units, seriously damaged units, and any other defect which detracts from the appearance or edibility of the product.

(1) "Harmless extraneous vegetable material" means:

(i) Material common to the pea or carrot plant (such as leaves, stems, or pods); and

(ii) Harmless material from other plants (such as thistle buds or seeds) which are succulent.

(2) "Damaged unit" means any pea or carrot unit that is affected by discoloration or other blemish to the extent that the appearance or edibility of the unit is materially affected and has the following specific meanings with respect to each vegetable:

(i) *Peas.* Any spotted or off-colored pea (other than blond peas) such as brown or gray discoloration.

(ii) *Carrots.* Any unit possessing an unpeeled area greater than the area of a circle one-eighth inch in diameter; and any unit blemished by internal or external discoloration, such as sunburn or green color, or other similar color.

(3) "Seriously damaged unit" means a pea or carrot unit that is damaged to the extent that the appearance or edibility of the unit is seriously affected and includes units with very dark spots or serious discoloration or other abnormalities.

(4) "Other defects" means defects not specifically mentioned that affect the appearance or edibility of the product and include, but are not limited to, the following:

(i) *Peas.* Mashed peas, broken peas, loose cotyledons, loose skins, and any portions thereof;

(ii) *Carrots.* Crushed, broken, or cracked units or units with excessively frayed edges and surfaces.

(b) (*A*) *Classification.* Canned peas and carrots that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that there may be present:

(1) Not more than one (1) piece of harmless extraneous material per 60 ounces of drained product (average of entire sample); and

(2) Not more than the following per sample unit of 10 ounces:

(i) A total of 8 damaged and seriously damaged units of which not more than one (1) may be seriously damaged: *Provided,* That damaged and seriously damaged units, either singly or in combination, may no more than slightly affect the appearance or eating quality of the product;

(ii) Harmless extraneous material and/or other defects, individually or collectively, which materially affect the appearance of the product; and

(iii) Any combination of the foregoing which materially affect the appearance or eating quality of the product.

(c) (*B*) *Classification.* If the canned peas and carrots are reasonably free from defects a score of 24 to 26 points may be given. Canned peas and carrots that fall into this classification shall not be graded above Grade B, regardless of the total score for the product (limiting rule). "Reasonably free from defects" means that there may be present:

(1) Not more than one (1) piece of harmless extraneous material per 30 ounces of drained product (average of entire sample); and

(2) Not more than the following per sample unit of 10 ounces:

(i) A total of 15 damaged and seriously damaged units of which not more than 3 units may be seriously damaged: *Provided,* That damaged and seriously damaged units, either singly or in combination, do not seriously affect the appearance or eating quality of the product;

(ii) Harmless extraneous material and/or other defects, individually or collectively, which seriously affect the appearance or eating quality; and

(iii) Any combination of the foregoing which seriously affect the appearance or eating quality of the product.

(d) (*SStd*) *Classification.* Canned peas and carrots that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

§ 52.6212 Character.

(a) *General.* The factor of character refers to the tenderness and maturity of the peas; and the tenderness and degree of freedom from stringy or coarse fibers in the carrots.

(b) (*A*) *Classification.* Canned peas and carrots which possess a good character may be given a score of 27 to 30 points. Good character means that:

(1) *Carrots.* The carrot units are tender, are not fibrous, and possess a practically uniform texture.

(2) *Peas.* The peas are at least reasonably tender and comply with the requirements of Table III.

(c) (*B*) *Classification.* If the canned peas and carrots possess a reasonably good character, a score of 24 to 26 points may be given. Canned peas and carrots that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (limiting rule). "Reasonably good character" means that:

(1) *Carrots.* The carrot units are at least reasonably tender, may be variable in texture but are not tough, hard, or mushy; and not more than 5 percent, by weight, of the carrot ingredient may possess coarse, fibrous material.

(2) *Peas.* The peas are at least fairly tender; the skins of not more than 5 percent, by count, of the peas may be ruptured to a width of one-sixteenth inch or more; and, the peas comply with the requirements of Table III.

(d) (*SStd*) *Classification.* Canned peas and carrots that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (limiting rule).

TABLE III—SUMMARY OF MAXIMUM ALLOWANCES FOR THE BRINE FLOTATION TEST

Grade	Score range	Maximum number of peas that sink in 10 seconds		
		13% salt in solution	15% salt in solution	16% salt in solution
		Percent by count		
A	27 to 30	5	2	(1)
B	24 to 26	(2)	10	2

[1] None.

[2] No limit.

METHODS OF ANALYSES

§ 52.6213 Methods of analyses.

(a) *Brine flotation test.* The brine flotation test utilizes salt solutions of various specific gravities to separate the peas according to maturity. The brine solutions are based on the percentage, by weight, of pure salt (NaCl) in solution. In making the test a 250 ml. glass beaker is filled with the brine solution to a depth of approximately 2 inches. The brine equipment, solution, and peas should be at the same temperature. Only peas that sink to the bottom of the receptacle within 10 seconds after immersion are counted as "peas that sink". Pieces of peas and loose skins should not be used in making the brine flotation test.

LOT COMPLIANCE

§ 52.6214 Ascertaining the grade of a lot.

The grade of a lot of canned peas and carrots covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

SCORE SHEET

§ 52.6215 Score sheet for canned peas and carrots.

Size and kind of container

Container mark or identification

Label

Net weight (ounces)

Vacuum reading (in inches)

Drained weight (ounces)

Kinds of ingredients	Per sample unit	
	Aggregate weight each ingredient (ounce)	Proportion of ingredient (percent)
Peas, Sweet		
Carrots:		
Diced (approx. "......" cubes)		
Double-diced		
Sliced (approx. "......" diameter)		
Strips		
Total weight of drained vegetables		100

Factors		Score points	
Color	20	(A)	18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Uniformity of Size and Shape	20	(A)	18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Absence of Defects	30	(A)	27-30
		(B)	[1] 24-26
		(SStd)	[1] 0-23
Character	30	(A)	27-30
		(B)	[1] 24-26
		(SStd)	[1] 0-23

Flavor ( ) Good ( ) Fairly Good ( ) Off

Total score

Grade

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[1] Indicates limiting rule

Subpart—United States Standards for Grades of Canned Solid-Pack Apricots

SOURCE: 39 FR 8909, Mar. 7, 1974, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

PRODUCT DESCRIPTION, STYLES, AND GRADES

§ 52.6241 Product description.

"Canned solid-pack apricots" is the product represented as defined in the standards of identity for canned apricots (21 CFR 145.115(a)) issued pursuant to the Federal Food, Drug, and Cosmetic Act and prepared in one of the styles specified in § 52.6242 and is sealed in a container and before or after sealing is so processed by heat as to prevent spoilage. The food may be seasoned with one or more of the optional ingredients permitted in the aforementioned standards of identity.

[41 FR 20389, May 18, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.6242 Styles.

(a) "Halves" are apricots cut approximately in half along the suture from stem to apex.

(b) "Slices" are apricots cut into thin sectors or strips.

(c) "Pieces or irregular pieces" are apricot units that are predominantly irregular in size and shape which do not conform to a single style or which are a mixture of halves and slices.

[39 FR 8909, Mar. 7, 1974, as amended at 41 FR 20389, May 18, 1976. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981]

§ 52.6243 Grades.

(a) "U.S. Grade C" or "U.S. Standard" is the quality of the product that:

(1) Has normal flavor and odor;

(2) Has at least a fairly good color;

(3) Has at least a fairly good character;

(4) Is at least fairly free from defects; and

(5) Scores not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(b) "Substandard" is the quality that fails to meet the requirements of "U.S. Grade C."

Fill of Container, Drained Weights

§ 52.6244 Recommended fill of container.

The recommended fill of container for canned solid-pack apricots is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purposes of these grades. It is recommended that each container be as full of apricots as practicable without impairment of quality and that the product occupy not less than 90 percent of the volume of the container.

§ 52.6245 Recommended minimum drained weight.

(a) *General.* The minimum drained weight recommendations in Table I are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades.

(b) *Definitions of symbols.* (1) LL—Lower limit for individual drained weights.

(2) X_d—Minimum sample average drained weight value.

(c) *Method for ascertaining drained weight.* (1) The drained weight is determined by emptying the contents of the container upon a U.S. Standard No. 8 circular sieve of proper diameter containing 8 meshes to the inch (0.0937±3 percent, square openings) so as to distribute the product evenly, inclining the sieve to approximately a 17 to 20 degree angle to facilitate drainage, and allowing the product to drain for two minutes.

(2) The drained weight is the weight of the sieve and apricots less the weight of the dry sieve. A sieve 12 inches in diameter is used.

(d) *Compliance with recommended minimum drained weights.* A lot of canned solid-pack apricots is considered as meeting the minimum drained weight recommendations if the following criteria are met:

(1) The average of the drained weights from all the sample units in the sample meets the recommended average drained weight (designated as X_d) in Table I; and

(2) The number of sample units which fail to meet the recommended minimum drained weight for individuals (designated as LL) in Table I does not exceed the applicable acceptance number specified in Table II.

Table I—Recommended Drained Weights for Canned Solid-Pack Apricots

Container designation	Dimensions	Ounces	
		LL	X_d
No. 10	603 × 700	89.5	92.0

Table II—Acceptance Numbers for Recommended Drained Weight

Sample size (number of sample units)	3	6	13	21	29	38	48	60
Acceptance No.	0	1	2	3	4	5	6	7

Sample Unit Size

§ 52.6246 Sample unit size.

For purposes of evaluating quality factors, the sample unit size shall be the entire contents of a No. 10 container or equivalent.

Factors of Quality

§ 52.6247 Ascertaining the grade of a sample unit.

In addition to considering other requirements outlined in the standards, the following quality factors are evaluated:

(a) *Factors not rated by score points.* (1) Flavor and odor.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on the scale of 100. Score points are assigned the various quality factors in accordance with the scoring guide in Table III. The maximum number of points that may be given such factors are:

	Points
Color	20
Defects	40
Character	40
Total score	100

(c) *Definition of flavor and odor.* "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

§ 52.6248 Ascertaining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "14 to 20 points" means 14, 15, 16, 17, 18, 19, or 20 points).

§ 52.6249 Color.

(a) *General.* The color of canned solid-pack apricots refers to the characteristic color of the outer, uncut surfaces of the units, the varying degrees of "pale yellow areas", "light-greenish yellow areas", and "light green areas"; and the uniformity of the individual sample unit when viewed in mass.

(b) *Definitions*—(1) *Well colored.* "Well colored" means that the units have a typical color characteristic of well-matured apricots. The units may have pale yellow areas not exceeding one-fourth of the outer surface area and are free from brown color due to oxidation, improper processing, or other causes.

(2) *Reasonably well-colored.* "Reasonably well-colored" means that the units may possess pale yellow areas not exceeding one-half of the outer surface area, or may possess light greenish-yellow areas not exceeding one-fourth of the outer surface area. The units may possess a slight brown color due to oxidation, or other causes.

(3) *Fairly well-colored.* "Fairly well-colored" means that the units may be pale yellow or may possess light greenish-yellow areas not exceeding one-half of the outer surface areas, or greenish areas not exceeding one-fourth of the outer surface and/or may possess more than a slight brown color due to oxidation, or other causes, but not off-color.

(4) *Poorly colored.* "Poorly colored" means that the units may possess light greenish-yellow areas exceeding one-half of the outer surface area, or green areas exceeding one-fourth of the outer surface area, or are off-color for any reason.

(c) (*C*) *classification.* Canned solid-pack apricots that possess a fairly good color may be given a score of 14 to 20 points. "Fairly good color" means that (1) the sample unit, in mass, may be variable in color; and (2) the apricots are at least fairly well colored, except that the weight of the units that are poorly colored does not exceed the weight specified in Table III.

(d) (*SStd*) *classification.* Canned solid-pack apricots that fail to meet the requirements of U.S. Grade C may be given a score of 0 to 13 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6250 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from pit material, harmless extraneous material, short stems, minor blemishes and major blemishes, and from any other defect not specifically mentioned.

(b) *Definitions and explanations of defects*—(1) *Harmless extraneous material.* Any vegetable substance (such as, but not limited to, a leaf or portion thereof or a large stem) that is harmless.

(2) *Short stem.* The short, thick, woody stem which attaches the apricot to the twig of the tree or other stem material of equivalent woodiness and shortness.

(3) *Pit material.* Any whole pit or any hard portion of an apricot pit, regardless of size.

(4) *Minor blemish.* (i) Light brown or brown surface areas, including "freckles" which singly or in combination on a unit, exceed in aggregate the area of a circle ⅛ inch in diameter but do not exceed in the aggregate the area of a circle ¼ inch in diameter.

(ii) Any blemish or abnormality whether or not specifically defined which materially but not seriously affects the appearance or eating quality of the product.

(5) *Major blemish.* (i) Light brown to brown surface areas which, singly or in the aggregate on a unit, exceed the area of a circle ¼ inch in diameter.

(ii) Blemishes that extend into the fruit tissue regardless of the area or depth.

(iii) Single dark brown surface areas that exceed the area of a circle ⅛ inch in diameter, whether or not the unit is affected by minor blemishes; or

(iv) Any blemish whether or not specifically defined which seriously affects the appearance and/or eating quality of the unit but is not a filthy or decomposed substance.

(c) (*C*) *classification.* Canned solid-pack apricots that are at least fairly free from defects may be given a score of 28 to 40 points. "Fairly free" from defects means that the defects present do not exceed the allowances specified in Table III.

(d) (*SStd*) *classification.* Canned solid-pack apricots that fail to meet the defect requirements of U.S. Grade C may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6251 Character.

(a) *General.* The factor of character refers to the degree of ripeness, the texture and condition of the flesh, the firmness, and tenderness of the canned solid-pack apricots.

(b) *Definitions*—(1) *Good character.* "Good character" means that the units have a practically uniform, tender, fleshy texture typical of well-ripened, properly prepared, and properly processed canned solid-pack apricots; the units may be soft but hold their original conformation and size without material disintegration.

(2) *Reasonably good character.* "Reasonably good character" means that the units possess at least a reasonably uniform, reasonably tender texture typical of properly ripened apricots that are properly processed; the texture is at least reasonably fleshy, and the units are at least reasonably thick but the tenderness may be variable within the unit or among the units; the units may be soft to slightly firm or ragged, but are not mushy.

(3) *Fairly good character.* "Fairly good character" means that the units possess a texture of properly processed apricots which may be variable in fleshiness but the texture is fairly fleshy and the units may be lacking uniformity of tenderness or may be markedly ragged with frayed edges or may be very soft or mushy, or may be moderately firm.

(4) *Poor character.* "Poor character" means that the units are very mushy or very firm.

(c) (*C*) *classification.* Canned solid-pack apricots that possess a fairly good character may be given a score of 28 to 40 points. To score in this classification, the weight of units that possess poor character does not exceed the weight specified in Table III.

(d) (*SStd*) *classification.* Canned solid-pack apricots which fail to meet the requirements of U.S. Grade C may be given a score of 0 to 27 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

ALLOWANCES FOR QUALITY FACTORS

§ 52.6252 Allowances for quality factors for canned solid-pack apricots.

TABLE III

Quality factors	Maximum allowances			
		Grade C		Substandard
Score points	18-20	16-17	14-15	0-13
Color ounces of apricots that are: Well colored	All	No limit	No limit	No limit.

TABLE III—Continued

Quality factors	Maximum allowances			
		Grade C		Substandard
Reasonably well colored	5	All	do	Do
Fairly well colored	2	9	All	Do
Poorly colored	0	2	14	All
Score points	36-40	32-35	28-31	0-27
Defects (numbers of defects) Harmless extraneous material.	0	1	3	More than 3
Short stems	1	3	6	More than 6
Pit material	1	3	6	Do
Units affected by minor and major blemishes	9	18	36	More than 36
Major blemishes	4	9	18	More than 18
Score points	36-40	32-35	28-31	0-27
Character ounces of apricot units that possess: Good character	All	No limit	No lim-	No limit
Reasonably good character	5	All	do	Do
Fairly good character	2	9	All	Do
Poor character	0	2	9	Do

LOT INSPECTION AND CERTIFICATION

§ 52.6253 Ascertaining the grade of a lot.

The grade of a lot of canned solid-pack apricots covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 through 52.83).

SCORE SHEET

§ 52.6254 Score sheet for canned solid-pack apricots.

Size and kind of container

Container mark or identification

Label

Net weight (ounces)

Vacuum (inches)

Drained weight (ounces)

Degrees Brix (if sweetened)

Factors		Score points	
Color	20	(C)	14-20
		(SStd) [1]	0-13
Defects	40	(C)	28-40
		(SStd) [1]	0-27
Character	40	(C)	28-40
		(SStd) [1]	0-27
Total score	100		

Normal flavor and odor

Grade

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Cranberries [1]

PRODUCT DESCRIPTION AND GRADES

SOURCE: 36 FR 18777, Sept. 22, 1971, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.6281 Product description.

Frozen cranberries is the product prepared from the sound, mature berries of the commonly cultivated cranberry plant. The product is prepared by sorting and cleaning to assure a wholesome product. The prepared product is frozen and stored at temperatures necessary for preservation.

§ 52.6282 Grades of frozen cranberries.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen cranberries that:

(1) Possess a good color;

(2) Are practically free from defects;

(3) Possess a good character;

(4) Possess a normal flavor and odor;

(5) Are of similar varietal characteristics;

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[1] Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetics Act or with applicable State laws and regulations.

(6) Have no grit or silt present that affects the appearance or edibility of the product; and

(7) Score not less than 90 points when scored in accordance with the scoring system outlined in this subpart. Frozen cranberries of this grade may contain not more than 5 percent, by count, of berries that are less than thirteen thirty-seconds of an inch in diameter.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen cranberries that:

(1) Possess a reasonably good color;

(2) Are reasonably free from defects;

(3) Possess a reasonably good character;

(4) Possess a normal flavor and odor;

(5) Are of similar varietal characteristics;

(6) Have no grit or silt present that affects the appearance or edibility of the product; and

(7) Score not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

Frozen cranberries of this grade may contain not more than 5 percent, by count, of berries that are less than nine thirty-seconds of an inch in diameter.

(c) "U.S. Grade C" or "U.S. Standard" is the quality of frozen cranberries that:

(1) Possess a fairly good color;

(2) Are fairly free from defects;

(3) Possess a fairly good character;

(4) Possess a normal flavor and odor;

(5) Have not more than a trace of grit or silt present that slightly affects the appearance or edibility of the product; and

(6) Score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(d) "Substandard" is the quality of frozen cranberries that fail to meet the requirements of "U.S. Grade C".

SAMPLE UNIT SIZE

§ 52.6283 Sample unit size.

For purposes of evaluating quality factors, the sample unit size is 12 ounces of cranberries.

FACTORS OF QUALITY

§ 52.6284 Ascertaining the grade of a sample unit.

(a) *General.* The factors of size, color, defects, and character shall be evaluated immediately after the product is thawed.

(b) *Factors not rated by score points.* (1) Flavor and odor.

(2) Size.

(3) Varietal characteristics.

(c) *Definitions.* (1) "Normal flavor and odor" means that the product is free from objectionable flavors and objectionable odors of any kind.

(2) "Diameter" means the greatest dimension measured at right angles to a line from the stem end to blossom end of the berry.

(d) *Factors rated by score points.* The relative importance of each scoreable factor is expressed numerically on the scale of 100. The maximum number of points that may be given such factors are:

	Points
Color	50
Defects	30
Character	20
Total score	100

§ 52.6285 Ascertaining the rating for the factors which are scored.

The essential variations, within each scoreable factor, are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "45 to 50 points" means, 45, 46, 47, 48, 49, or 50 points).

§ 52.6286 Color.

(a) *General.* The color of frozen cranberries refers to:

(1) The characteristic color, the varying degrees of dark red, red, pink, light pink, tan, yellowish green, and green areas of the outer surface of the individual cranberry; and

(2) The uniformity of the individual sample unit when viewed as a mass.

(b) *Definitions.* (1) "Well colored" means that 90 percent or more of the surface of the individual cranberry is a pink or red color characteristic of the variety.

(2) "Fairly well colored" means that 75 percent or more of the surface of the individual cranberry is a pink or red color characteristic of the variety.

(3) "Poorly colored" means that less than 75 percent of the surface of the individual cranberry is a pink or red color characteristic of the variety, provided it has some pink or red color.

(4) "Uncolored" means the surface of the individual cranberry is light yellow to light green and possesses no area of pink or red color.

(c) (*A*) *classification.* Frozen cranberries that possess a good color may be given a score of 45 to 50 points. "Good color" means that the color falls within the limits specified in table I.

(d) (*B*) *classification.* Frozen cranberries that possess a reasonably good color may be given a score of 40 to 44 points. "Reasonably good color" means that the color falls within the limits specified in table I. Frozen cranberries that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule).

(e) (*C*) *classification.* Frozen cranberries that possess a fiarly good color may be given a score of 35 to 39 points. "Fairly good color" means that the color falls within the limits specified in Table I. Frozen cranberries that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule).

(f) (*SStd*) *classification.* Frozen cranberries that fail to meet the requirements of the (C) classification may be given a score of 0 to 34 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—COLOR ALLOWANCES FOR FROZEN CRANBERRIES

	Grade A, good color	Grade B, reasononably good color	Grade C, fairly good colo
Any condition affecting the overall color appearance of the sample unit.	Not more than slightly affected	Not materially affected	Not seriously affected
	Maximum number of cranberries within each sample unit		
Fairly well-colored and/or poorly colored	15		
Fairly well-colored and/or poorly colored and/or uncolored.		30	
Poorly colored and/or uncolored			60
Poorly colored	3	10	
Uncolored	None	5	
Well colored	Remainder	Remainder	
Well colored and/or fairly well colored			Remainder

§ 52.6287 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from harmless extraneous plant material, fine stems, minor blemishes, and major blemishes, and from any other defects which affect the appearance or edibility of the product.

(b) *Definitions.* (1) "Harmless extraneous plant material" means material, such as vines and leaves, that is part of the cranberry plant or its immediate environment and that may be reasonably expected to become incorporated in the finished product.

(2) "Minor blemish" means discoloration or damage caused by sunscald, pathological, mechanical, or other means which exceeds in the aggregate the area of a circle one-eighth of an inch in diameter or which slightly affects the appearance or edibility of the individual cranberry, regardless of area.

(3) "Major blemish" means discoloration or damage caused by sunscald, pathological, mechanical, or other means which exceeds in the aggregate the area of a circle one-fourth of an inch in diameter or which materially

affects the appearance or edibility of the individual cranberry, regardless of area.

(4) "Fine stem" means a stem that attaches the cranberry to the vine, whether connected or loose, that is three-fourths of an inch or more in length.

(c) (*A*) *classification.* Frozen cranberries that are practically free from defects may be given a score of 27 to 30 points. "Practically free from defects" means that the defects present fall within the limits specified in table II.

(d) (*B*) *classification.* Frozen cranberries that are reasonably free from defects may be given a score of 24 to 26 points. "Reasonably free from defects" means that the defects present fall within the limits specified in table II. Frozen cranberries that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule).

(e) (*C*) *classification.* Frozen cranberries that are fairly free from defects may be given a score of 21 to 23 points. "Fairly free from defects" means that the defects present fall within the limits specified in table II. Frozen cranberries that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule).

(f) (*SStd*) *classification.* Frozen cranberries that fail to meet the requirements of the (C) classification may be given a score of 0 to 20 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE II—DEFECT ALLOWANCES FOR FROZEN CRANBERRIES

	Grade A	Grade B	Grade C
Defects affecting the overall appearance of the sample unit.	Not more than slightly affected.	Not materially affected	Not seriously affected.
	Maximum in each sample unit		
Harmless extraneous plant material	⅛ sq. in	¼ sq. in	½ sq. in.
Total—major and minor blemished cranberries.	15, but—	25, but—	35, but—
Major blemished cranberries	No more than 7	No more than 10	No more than 15.
Fine stems	4	4	No limit.

§ 52.6288 Character.

(a) (*A*) *classification.* Frozen cranberries that possess good character may be given a score of 18 to 20 points. "Good character" means that the cranberries may be slightly soft to moderately firm but not more than 10 cranberries in the sample unit may be mushy or hard.

(b) (*B*) *classification.* Frozen cranberries that possess reasonably good character may be given a score of 16 or 17 points. "Reasonably good character" means that the cranberries may be slightly soft to moderately firm but not more than 20 cranberries in the sample unit may be mushy or hard. Frozen cranberries that fall into this classification shall not be graded above U.S. Grade B regardless of the total score for the product (this is a limiting rule).

(c) (*C*) *classification.* Frozen cranberries that possess fairly good character may be given a score of 14 or 15 points. "Fairly good character" means that the cranberries may be very soft to very firm but not more than 60 cranberries in the sample unit may be mushy or hard. Frozen cranberries that fall into this classification shall not be graded above U.S. Grade C regardless of the total score for the product (this is a limiting rule).

(d) (*SStd*) *classification.* Frozen cranberries that fail to meet the requirements of the (C) classification may be given a score of 0 to 13 points and shall not be graded above Substandard regardless of the total score for the product (this is a limiting rule).

Lot Compliance

§ 52.6289 Ascertaining the grade of a lot.

The grade of a lot of frozen cranberries covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).

Score Sheet

§ 52.6290 Score sheet for frozen cranberries.

Size and kind of container ....
Container mark or identification ....
Label ....
Net weight (ounces) ....
Size (percent under ...... inch) ....

Factors		Score points	
Color	50	(A)	45–50
		(B)	[1]40–44
		(C)	[1]35–39
		(SStd)	[1]0–34
Defects	30	(A)	27–30
		(B)	[1]24–26
		(C)	[1]21–23
		(SStd)	[1]0–20
Character	20	(A)	18–20
		(B)	[1]16–17
		(C)	[1]14–15
		(SStd)	[1]0–13
Total score	100		

Flavor and odor ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Concentrated Apple Juice

Source: 40 FR 13196, Mar. 25, 1975, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

Product Description and Grades

§ 52.6321 Product description.

Frozen concentrated apple juice is prepared from the unfermented, unsweetened, unacidified liquid obtained from the first pressing of properly prepared, sound, clean, mature, fresh apples, and/or parts thereof by good commercial processes. The juice is clarified and concentrated to at least 22.9 degrees Brix. The apple juice concentrate so prepared, with or without the addition of ingredients permissible under the Federal Food, Drug, and Cosmetic Act, is packed and frozen in accordance with good commercial practice and maintained at temperatures necessary for the preservation of the product.

§ 52.6322 Brix requirements.

Brix value of the finished concentrate shall not be less than the following for the respective dilution factor of frozen concentrated apple juice:

Dilution factor	Minimum Brix value of concentrate (degrees)
1 plus 1	22.9
2 plus 1	33.0
3 plus 1	42.2
4 plus 1	50.8
5 plus 1	58.8
6 plus 1	66.3
7 plus 1	73.3

§ 52.6323 Grades.

(a) "U.S. Grade A" or "U.S. Fancy" is the quality of frozen concentrated apple juice which, when reconstituted according to § 52.6325(b), has the following attributes:

(1) Good color and clarity;

(2) Is practically free from defects;

(3) Very good flavor and aroma; and

(4) Scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" or "U.S. Choice" is the quality of frozen concentrated apple juice which, when reconstituted according to § 52.6325(b), has at least the following attributes:

(1) Reasonably good color and clarity;

(2) Is reasonably free from defects;

(3) Good flavor and aroma; and

(4) Scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen concentrated apple juice that fails to meet the requirements of U.S. Grade B.

FILL OF CONTAINER

§ 52.6324 Recommended fill of container.

Recommended fill of container is not incorporated in the grades of the finished product since the fill of the container, as such, is not a factor of quality for the purposes of these grades. It is recommended that the container be filled with frozen concentrated apple juice to not less than 90 percent of the capacity of the container.

FACTORS OF QUALITY

§ 52.6325 Ascertaining the grade.

(a) The grade of frozen concentrated apple juice is ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings for the factors which are scored. The relative importance of each factor which is scored is expressed numerically on the scale of 100. The maximum number of points which may be given such factors are:

Factors	Points
Color and clarity	20
Defects	20
Flavor and aroma	60
Total score	100

(b) The scores for the factors of color and clarity, defects, and flavor and aroma are determined immediately after reconstituting according to label directions or other appropriate directions.

§ 52.6326 Ascertaining the rating for the factors which are scored.

The essential variations, within each scoreable factor, are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example: "18 to 20 points" means 18, 19, or 20 points).

§ 52.6327 Color and clarity.

(a) (*A*) *classification.* Frozen concentrated apple juice which has a good color and clarity may be given a score of 18 to 20 points. "Good color and clarity" means that the color, of the frozen concentrated apple juice after reconstitution, is bright and transparent and of a light golden appearance, but not darker than USDA Honey Color Standards "White" designation.

(b) (*B*) *classification.* Frozen concentrated apple juice which has a reasonably good color and clarity may be given a score of 16 or 17 points. "Reasonably good color and clarity" means the color, of the frozen concentrated apple juice after reconstitution, is slightly dull or slightly turbid; may be light golden to light amber in appearance but not darker than USDA Honey Color Standards "Light Amber" designation. Frozen concentrated apple juice that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(c) (*SStd*) *classification.* Frozen concentrated apple juice that is dull, turbid or otherwise fails the requirements of U.S. Grade B may be given a score 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6328 Defects.

(a) *General.* The factor of defects refers to the degree of freedom from sediment or other residues, dark specks, or any other defects which affect the appearance or palatability of the product.

(b) (*A*) *classification.* Frozen concentrated apple juice which is practically free from defects may be given a score of 18 to 20 points. "Practically free from defects" means that the frozen concentrated apple juice after reconstitution may have a slight amount of sediment or residue of an amorphous nature; may have not more than a trace of dark specks or of sediment or residue of a non-amorphous nature, or any other defects: *Provided,* That all defects present do not more than slightly affect the appearance or palatability of the product.

(c) (*B*) *classification.* Frozen concentrated apple juice which is reasonably free from defects may be given a score of 16 to 17 points. "Reasonably free from defects" means that the frozen concentrated apple juice after reconstitution may have a slight amount of sediment or residue of an amorphous or nonamorphous nature, of dark specks, or of any other defects: *Provided,* That all defects present do not materially affect the appearance or palatability of the product. Frozen concentrated apple juice that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(d) (*SStd*) *classification.* Frozen concentrated apple juice which fails to meet the requirements for U.S. Grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6329 Flavor and aroma.

(a) *General.* The factor of flavor and aroma refers to the degree of excellence and palatability of a distinct apple juice flavor and aroma typical of apple juice that has been properly processed.

(b) (*A*) *classification.* Frozen concentrated apple juice which has a very good flavor and aroma may be given a score of 54 to 60 points. "Very good flavor and aroma" means that the frozen concentrated apple juice after reconstitution has a fine, distinct fruity flavor and bouquet, that is free from astringent flavors, flavors due to overripe apples, oxidation, caramelization, or ground or musty flavors, and is free from objectionable flavors or objectionable aromas of any kind; and in addition, meets the following requirement:

Brix-Acid Ratio—Minimum-21:1
Maximum-53:1

(c) (*B*) *classification.* Frozen concentrated apple juice which has a good flavor and aroma may be given a score of 48 to 53 points. "Good flavor and aroma" means that the frozen concentrated apple juice after reconstitution has a normal flavor and bouquet, may be slightly astringent; or may be slightly affected by overripe apples, oxidation, caramelization, or ground or musty flavors, but is free from objectionable flavors or objectionable aromas of any kind; and, in addition, meets the following requirement:

Brix-Acid Ratio—Minimum-18:1
Maximum-60:1

Frozen concentrated apple juice that falls into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule).

(d) (*SStd*) *classification.* Frozen concentrated apple juice that fails to meet the requirements of U.S. Grade B may be given a score of 0 to 47 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

EXPLANATIONS

§ 52.6330 Explanation of terms.

(a) "Brix" means soluble solids of the concentrated apple juice as measured on the Refractometer, expressed as percent by weight sucrose (degrees Brix) with correction for temperature to the equivalent at 20° C (68° F), but without correction for invert sugar or other substances. The Brix of frozen concentrated apple juice may be determined by any other method which gives equivalent results.

(b) "Acid" means grams of acid (calculated as malic acid) per 100 grams of concentrated juice determined by titration with a standard sodium hydroxide solution, using phenolphthalein as an indicator or any other satisfactory indicator and using an acid factor of 0.067.

(c) "Brix-Acid ratio" means the ratio of the Brix of the concentrated juice in degrees Brix to the grams of acid (calculated as malic acid) per 100 grams of concentrated juice.

(d) The USDA Honey Color Standards, referenced in § 52.6327, and information concerning procurement and use is available from:

Chief, Processed Products Standards and Inspection Branch, Fruit & Vegetable Division, AMS, U.S. Department of Agriculture, Washington, D.C. 20250.

LOT COMPLIANCE

§ 52.6331 Ascertaining the grade of a lot.

The grade of a lot of frozen concentrated apple juice covered by these standards is determined by the procedures set forth in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (§§ 52.1 to 52.83).

SCORE SHEET

§ 52.6332 Score sheet.

Size and kind of container ....

Container mark or identification ....

Label ....

Net contents (fluid ounces) ....

Brix (degrees) ....

Acid (malic grams/100 grams) ....

Brix-Acid Ratio ....

Factors		Score points	
Color and clarity ..	20	(A)	18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Defects	20	(A)	18-20
		(B)	[1] 16-17
		(SStd)	[1] 0-15
Flavor and aroma.	60	(A)	54-60
		(B)	[1] 48-53
		(SStd)	[1] 0-47
Total score	100		

Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Frozen Hash Brown Potatoes

SOURCE: 41 FR 43386, Oct. 1, 1976 unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.6401 Product description.

Frozen hash brown potatoes are prepared from mature, sound, white or Irish potatoes (*Solanum tuberosum*) that are washed, peeled, sorted and trimmed to assure a clean and wholesome product. The potatoes so prepared are blanched, may or may not be fried and are shredded or diced or chopped and frozen and stored at temperatures necessary for their preservation.

§ 52.6402 Styles.

(a) *Shredded.* "Shredded" means potatoes cut into thin strips with cross-sectional dimensions from 1 mm by 2 mm to 4 mm by 6 mm and formed into a solid mass before freezing.

(b) *Diced.* "Diced" means potatoes cut into approximate cube shaped units from 6 mm to 15 mm on an edge and loose frozen and which contain not more than 90 grams, per sample unit, of units smaller than one-half the volume of the predominant size unit.

(c) *Chopped.* "Chopped" means potatoes random cut into pieces predominantly less than 32 mm in their greatest dimension and loose frozen.

§ 52.6403 Grades.

(a) "U.S. Grade A" is the quality of frozen hash brown potatoes which has the following attributes:

(1) Normal flavor and odor;

(2) Good color;

(3) Practically free from defects;

(4) Good texture; and scores not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" is the quality of frozen hash brown potatoes which has at least the following attributes:

(1) Normal flavor and odor;

(2) Reasonably good color;

(3) Reasonably free from defects;

(4) Reasonably good texture; and scores not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of frozen hash brown potatoes that fails to meet the requirements of Grade B.

§ 52.6404 Determining the grade.

In addition to considering the other requirements outlined in this subpart, the following quality factors are evaluated:

(a) *Factor not rated by score points.* Flavor and odor.

(b) *Factors rated by score points.* The relative importance of each factor which is scored is expressed numerically on a scale of 100. The maximum points that may be given such factors are:

Factor	Score points
Color	30
Defects	40
Texture	30
Total score	100

(c) *Sample unit size.* Sample unit size for evaluation of quality factors shall be 450 grams (15.9 ounces) for diced and chopped styles, and 340 grams (12 ounces) for shredded style.

(d) *Factor evaluation.* (1) The factors of flavor and odor and color are determined before and after heating.

(2) The factor of defects is determined before heating.

(3) The factor of texture is determined after heating.

(e) *"Normal flavor and odor"* means the characteristic flavor and odor of properly prepared potatoes. Such flavor is free from bitterness, from pronounced scorched or caramelized flavors, and from off-flavors and off-odors of any kind.

§ 52.6405 Determining the rating for the factors which are scored.

The essential variations within each factor, which is scored, are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor, which is scored, is inclusive (for example "27 to 30 points" means 27, 28, 29, or 30 points).

§ 52.6406 Color.

(a) (*A*) *classification.* Frozen hash brown potatoes that have a good color may be given a score of 27 to 30 points. "Good color" means the product, as a mass before heating, has a bright, uniform white to light cream color, which may include light brown units if processing included frying of any portion of the product. Such color is not more than slightly affected by yellowish units, greenish units, grayish units, or units which are otherwise discolored. After heating, the product surface shall have a fairly uniform brown color at least as dark as USDA No. 1 but not as dark as USDA No. 4 of the USDA Color Standards for Frozen French Fried Potatoes.

(b) (*B*) *classification.* Frozen hash brown potatoes that have a reasonably good color may be given a score of 24 to 26 points. Frozen hash brown potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good color" means the product, as a mass before heating, has a reasonably bright, uniform white to cream color, which may include brown units if processing included frying of any portion of the product. Such color is not seriously affected by yellowish units, greenish units, grayish units, or units which are otherwise discolored. After heating, the product surface may brown only slightly or unevenly, but is not charred.

(c) (*SStd.*) *classification.* Frozen hash brown potatoes that fail to meet the requirements of (B) classification may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6407 Defects.

(a) *General.* This factor is concerned with imperfections in the product, such as necrosis, crushed units, discolored eyes, and discolorations which affect its appearance or edibility.

(b) *Minor defects.* Minor defects are imperfections which detract only slightly from the appearance or edibility of the product. Among such minor defects are:

(1) Very light surface or internal discolorations of any size;

(2) Light brown surface or internal discolorations smaller in size than the area of a circle, or the volume of a sphere, of 4 mm diameter;

(3) Dark brown surface or internal discolorations smaller in size than the area of a circle, or the volume of a sphere, of 2 mm diameter; and

(4) In chopped and diced styles only, individual clusters of units which are not readily broken or separated manually, which weigh 5 grams or more but less than 10 grams.

(c) *Major defects.* Major defects are imperfections which materially detract from the appearance or edibility of the product. Among such major defects are:

(1) Light brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 4 mm diameter but smaller in size than the area of a circle, or the volume of a sphere, of 8 mm diameter;

(2) Dark brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 2 mm diameter but smaller in size than the area of a circle, or the volume of a sphere, of 4 mm diameter; and

(3) In chopped and diced styles only, individual clusters of units which are not readily broken or separated manually, which weigh 10 grams or more.

(d) *Severe defects.* Severe defects are imperfections which seriously detract from the appearance or edibility of the product. Among such severe defects are:

(1) Light brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 8 mm diameter;

(2) Dark brown surface or internal discolorations equal to or larger in size than the area of a circle, or the volume of a sphere, of 4 mm diameter; and

(3) Any condition of a potato unit which is offensive because of color, odor, character, or for any other reason.

(e) *(A) classification.* Frozen hash brown potatoes that are practically free from defects may be given a score of 36 to 40 points.

"Practically free from defects" means that:

(1) Any combination of defects present may no more than slightly detract from the appearance or edibility of the product; and

(2) The minor, major and severe defects, that may be present in the sample unit, do not exceed the allowances set forth in Table I.

(f) *(B) classification.* Frozen hash brown potatoes that are reasonably free from defects may be given a score of 32 to 35 points. Frozen hash brown potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably free from defects" means that:

(1) Any combination of defects present does not seriously detract from the appearance or edibility of the product; and

(2) The minor, major and severe defects, that may be present in the sample unit, do not exceed the allowances set forth in Table I.

(g) *(SStd) classification.* Frozen hash brown potatoes that fail to meet the requirements of (B) classification, may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—DEFECTS—MAXIMUM DEFECT ALLOWANCE PER SAMPLE UNIT

[Chopped and diced styles—450 g; shredded style 340 g]

Defect	Grade A	Grade B
Chopped and diced styles:		
Total minor, major and severe	18	36
Total major and severe	9	18
Severe	2	4
Clusters [1]		
Total minor and major	6	18
Major	2	6
Shredded style:		
Total minor, major and severe	14	27
Total major and severe	7	14
Severe	2	3

[1] The allowance for clusters in chopped and diced styles is in addition to the allowances for other defects that may be present.

§ 52.6408 Texture.

(a) The factor of texture is evaluated within 3 minutes after heating as specified in § 52.6409 and while the product is well above room temperature.

(b) *(A) classification.* Prepared hash brown potatoes that have a good texture may be given a score of 27 to 30 points. "Good texture" means the potato units are firm and tender and the product is not more than slightly affected by units which are hard, mushy, pasty, soggy, dry or oil soaked.

(c) *(B) classification.* Prepared hash brown potatoes that have a reasonably good texture may be given a score of 24 to 26 points. Frozen hash brown potatoes that fall into this classification shall not be graded above U.S. Grade B, regardless of the total score for the product (this is a limiting rule). "Reasonably good texture" means the potato units are reasonably firm and tender and the product is not seriously affected by units which are hard, mushy, pasty, soggy, dry, or oil soaked.

(d) (*SStd*) *classification.* Frozen hash brown potatoes that fail to meet the requirements of (B) classification may be given a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6409 Methods of analyses.

Heating. The sample unit or a representative portion should be heated according to the manufacturers' directions, or in a manner which will give equivalent results.

In the absence of such directions the following method may be used: Place approximately three tablespoons of cooking oil or fat in a frying pan—enough to properly fry the sample without excessive sticking—and preheat to 175 degrees C (347 degrees F). Add 170 to 225 grams (6 to 8 ounces) of the product and cook for 10 to 12 minutes; turning the product once or twice during cooking. A frying pan approximately 25 centimeters (10 inches) in diameter is appropriate for this method, however any suitable frying appliance may be used which will properly cook the desired amount of product.

§ 52.6410 Determining the grade of a lot.

The grade of a lot of frozen hash brown potatoes covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.83).

§ 52.6411 Score sheet.

Size and kind of container
Container mark or identification
Label
Net contents
Style
Color designation

Factors			Score points
Color	30	(A)	27 to 30
		(B)	[1] 24 to 26
		(SStd)	[1] 0 to 23
Defects	40	(A)	36 to 40
		(B)	[1] 32 to 35
		(SStd)	[1] 0 to 31
Texture	30	(A)	27 to 30
		(B)	[1] 24 to 26
		(SStd)	[1] 0 to 23
Total score	100		

Grade
Flavor and odor

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Pork and Beans

SOURCE: 41 FR 32225, Aug. 2, 1976, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.6441 Product description.

"Canned pork and beans" (canned dried white beans with pork) is the product prepared from dry mature white beans of the species *Phaseolus vulgaris L.*, with pork or pork fat; and with a packing medium or sauce consisting of water, tomato products, and any other safe and suitable ingredients permissible under the provisions of the Federal Food, Drug, and Cosmetic Act. The product is prepared by washing, soaking, blanching, or other processing. It is packed in hermetically sealed containers and sufficiently processed by heat to assure preservation.

§ 52.6442 Types.

(a) Pea beans (known also as Navy beans).

(b) Small white beans.

(c) Flat small white beans.

(d) Great northern beans.

(e) Other types of white beans (except white lima beans).

§ 52.6443 Grades.

(a) "U.S. Grade A" is the quality of canned pork and beans that has the following attributes:

(1) Practically similar varietal characteristics;

(2) At least a reasonably good consistency;

(3) Practically free from defects;

(4) Good character;

(5) Good flavor;

(6) Good color; and

(7) Totals not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" is the quality of canned pork and beans that has at least the following attributes:

(1) Reasonably similar varietal characteristics;

(2) Reasonably good consistency;

(3) Reasonably free from defects;

(4) Reasonably good character;

(5) Reasonably good flavor;

(6) Reasonably good color; and

(7) Totals not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned pork and beans that fails to meet the requirements of U.S. Grade B.

§ 52.6444 Sample unit size.

Compliance with requirements for factors of quality is based on a sample unit consisting of the entire contents of one container, irrespective of container size.

§ 52.6445 Determining the grade.

(a) *General.* The grade of canned pork and beans is determined by considering, in addition to the requirements of the respective grade, the following factors:

(1) *Factors not rated by score points.*

(i) Similar varietal characteristics;

(ii) Color; and

(iii) Flavor.

(2) *Factors rated by score points.* The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Consistency	20
Absence of defects	40
Character	40
Total	100

(b) *Definitions*—(1) *Similar varietal characteristics.* (i) "Contrasting varieties" means varieties of dried beans other than those specified in § 52.6442 (such as red beans);

(ii) "Varieties that blend" means one or more of the varieties of dried beans specified in § 52.6442 other than the predominating variety of white beans (such as pea beans with small white beans);

(iii) "Practically similar varietal characteristics" means that the beans are practically alike in size, shape, color, general characteristics, and that there may be present not more than 0.5 percent, by weight, of contrasting varieties; and not more than 5 percent, by weight, of varieties that blend; and

(iv) "Reasonably similar varietal characteristics" means that the beans are reasonably alike in size, shape, color, general characteristics, and that there may be present not more than 1 percent, by weight, of contrasting varieties; and not more than 10 percent, by weight, of varieties that blend.

(2) *Color.* (i) "Good color" means that the beans have a color that is bright, typical and reasonably uniform; and that the sauce is reasonably bright and has the distinguishing color characteristics of the addition of tomato products; and

(ii) "Reasonably good color" means that the beans have a color that is fairly uniform, that may be slightly dull but not off-color; and that the sauce may be lacking in the distinguishing color characteristics of the addition of tomato products.

(3) *Flavor.* (i) "Good flavor" means that the product has a good, characteristic flavor and odor, and is free from objectionable flavors and objectionable odors of any kind; and that the flavor of the sauce is rich, distinct and characteristic of the ingredients including but not limited to tomato products; and

(ii) "Reasonably good flavor" means that the product may be lacking in good flavor and odor, but is free from objectionable flavors and objectionable odors of any kind; and that the flavor of the sauce may be weak.

§ 52.6446 Determining the rating for the factors which are scored.

The essential variations within each factor which is scored are so described that the value is determined for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.6447 Consistency.

(a) "Matting" means compaction to the extent that the beans cannot be removed from the container without causing damage or excessive mushiness.

(b) "Good consistency" means that the sauce is smooth and is neither grainy nor lumpy; the product is practically free from "matting"; and when emptied on a flat surface forms a slightly mounded mass of beans and sauce with not more than a slight separation of liquid. Canned pork and beans that have a good consistency may be given a score of 18 to 20 points.

(c) "Reasonably good consistency" means that the sauce is reasonably smooth and may be slightly grainy or slightly lumpy; the product may have a thick consistency but is reasonably free from "matting"; and when emptied on a flat surface may have practically no separation of liquid; or, the product may have a thin consistency with separation of liquid, but it shall not be watery. Canned pork and beans that have a reasonably good consistency may be given a score of 16 or 17 points.

(d) "Substandard." Canned pork and beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6448 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from extraneous vegetable material, loose skin, broken and mashed beans, and blemished beans; or any other defects that may affect the appearance or eating quality of the product.

(b) *Definitions.* (1) "Loose skin" means a skin or portions of a skin which have become separated wholly from the cotyledons;

(2) "Broken" means a cotyledon or portions of a cotyledon which have become separated; or a bean or portions of a bean with the skin or portions of the skin missing;

(3) "Mashed" means a bean that is crushed or flattened to the extent that the appearance is seriously affected;

(4) "Blemished" means a bean that is affected or damaged by any means to the extent that its appearance or eating quality is adversely affected;

(i) Slightly;

(ii) Materially;

(iii) Seriously; and

(5) "Extraneous vegetable material" means vegetable material common to the bean plant or other plants that is harmless upon eating and includes, but is not limited to, peas, lentils, field peas, cereal grains, and corn.

(c) *"Practically free from defects"* means that the canned pork and beans comply with the allowances in Table I. Canned pork and beans that are practically free from defects may be given a score of 36 to 40 points.

(d) *"Reasonably free from defects"* means that the canned pork and beans comply with the allowances in Table II. Canned pork and beans that are reasonably free from defects may be given a score of 32 to 35 points and shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a limiting rule).

(e) *"Substandard"* Canned pork and beans that fail to meet the allowances for grade B may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—ALLOWANCES FOR DEFECTS IN CANNED PORK AND BEANS—U.S. GRADE A

Defects	Maximum amount of defects permitted	
	Sample unit (percent of net weight)	Sample average
Loose skin, broken and mashed.	5	
Total blemished (slightly, materially, and seriously).	3	
Materially blemished	2	
Seriously blemished	1	
Extraneous vegetable material.	(1)	1 piece per 80 oz net weight.

[1] No limit.

TABLE II—ALLOWANCES FOR DEFECTS IN CANNED PORK AND BEANS—U.S. GRADE B

Defects	Maximum amount of defects permitted	
	Sample unit (percent of net weight)	Sample average
Loose skin, broken, and mashed.	10	
Total blemished (slightly, materially, and seriously).	6	
Materially blemished	4	
Seriously blemished	2	
Extraneous vegetable material.	(1)	1 piece per 20 oz net weight.

[1] No limit.

§ 52.6449 Character.

(a) *General.* The factor of character refers to the degree of freedom from hard beans, mushy beans, beans with tough skins, and from granulation; and to the overall palatability and texture of the beans.

(b) "Good character" means that the beans have a good, typical texture, that may be slightly granular or slightly firm; and that the skins are tender. Canned pork and beans that have a good character may be given a score of 36 to 40 points.

(c) "Reasonably good character" means that the beans have a reasonably good, typical texture, that the beans may be firm or soft and that the presence of hard and mushy beans does not materially affect the eating quality; that the skins may be slightly tough; and that the beans may be granular or mealy. Canned pork and beans that have a reasonably good character may be given a score of 32 to 35 points and shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a limiting rule).

(d) "Substandard." Canned pork and beans that fail to meet the requirements of grade B may be given a score of 0 to 31 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6450 Determining the grade of a lot.

The grade of a lot of canned pork and beans covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.83).

§ 52.6451 Score sheet for canned pork and beans.

Container size ....
Container code or identification ....
Label ....
Net weight ....
Vacuum ....
Type ....

Factors		Score points	
Consistency	20	(A)	18-20
		(B)	16-17
		(SSTD)	[1]0-15
Absence of defects.	40	(A)	36-40
		(B)	[1]32-35
		(SSTD)	[1]0-31
Character	40	(A)	36-40
		(B)	[1]32-35
		(SSTD)	[1]0-31
Total score	100		

Color ....
Flavor ....
Similar varietal characteristics ....
Grade ....

[1] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Baked Beans

SOURCE: 41 FR 32227, Aug. 2, 1976, unless otherwise noted. Redesignated at 42 FR 32514, June 27, 1977 and at 46 FR 63203, Dec. 31, 1981.

§ 52.6461 Product description.

"Canned baked beans" is the product prepared from dry mature beans used for canning; but not including soybeans. Any safe and suitable ingredients permissible under the provisions of the Federal Food, Drug, and Cosmetic Act may be used. The product is prepared by washing, soaking, and baking by the application of dry heat in open or loosely covered containers in a closed oven at atmospheric pressure for sufficient prolonged time to produce a typical texture and flavor. It is packed in hermetically sealed containers and sufficiently processed by heat to assure preservation.

§ 52.6462 Types.

(a) White beans.

(b) Red kidney beans.

(c) Yelloweye beans (including soldier beans).

(d) Beans of other colors or types suitable for baking (except soybeans).

§ 52.6463 Styles.

(a) "In brown sugar, molasses, or New England sauce" means packed with nutritive carbohydrate sweetening ingredient(s) and any other safe and suitable ingredient(s).

(b) "In tomato sauce" means packed with tomato pulp or a similar tomato product and any other safe and suitable ingredient(s).

§ 52.6464 Grades.

(a) "U.S. Grade A" is the quality of canned baked beans that has the following attributes:

(1) Practically similar varietal characteristics;

(2) Scores at least 17 points for consistency;

(3) Practically free from defects;

(4) Scores at least 17 points for character;

(5) Scores at least 17 points for flavor;

(6) Scores at least 13 points for color; and

(7) Totals not less than 90 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U.S. Grade B" is the quality of canned baked beans that has at least the following attributes:

(1) Reasonably similar varietal characteristics;

(2) Reasonably good consistency;

(3) Reasonably free from defects;

(4) Reasonably good character;

(5) Reasonably good flavor;

(6) Reasonably good color; and

(7) Totals not less than 80 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned baked beans that fails to meet the requirements of U.S. Grade B.

§ 52.6465 Sample unit size.

Compliance with requirements for factors of quality is based on a sample unit consisting of the entire contents of one container, irrespective of container size.

§ 52.6466 Determining the grade.

(a) *General.* The grade of canned baked beans is determined by considering, in addition to the requirements of the respective grade, the following factors:

(1) *Factor not rated by score points;*

(i) Similar varietal characteristics.

(2) *Factors rated by score points.* The relative importance of each factor is expressed numerically on the scale of 100. The maximum number of points that may be given each factor is:

Factors	Points
Color	15
Consistency	20
Flavor	20
Character	20
Absence of defects	25
Total	100

(b) *Definitions.* (1) Similar varietal characteristics:

(i) "Contrasting varieties" means dried beans of the same type or of other types that are of a noticeable different color, size, or shape from the dried beans of the predominating variety (such as red beans with white beans);

(ii) "Varieties that blend" means dried beans of the same type or of other types that are similar in color, size, or shape to the dried beans of the predominating variety (such as pea beans with small white beans);

(iii) "Practically similar varietal characteristics" means that the beans are practically alike in size, shape, color, general characteristics, and that there may be present not more than 0.5 percent, by weight, of contrasting varieties; and not more than 5 percent, by weight, of varieties that blend; and

(iv) "Reasonably similar varietal characteristics" means that the beans are reasonably alike in size, shape, color, general characteristics, and that there may be present not more than 1 percent, by weight, of contrasting varieties; and not more than 10 percent, by weight, of varieties that blend.

§ 52.6467 Determining the rating of the factors which are scored.

The essential variations within each factor which is scored are so described that the value may be determined for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "18 to 20 points" means 18, 19, or 20 points).

§ 52.6468 Color.

(a) "Good color" means that the baked beans have a uniform color typical of the baked variety and style of pack. Canned baked beans that have a good color may be given a score of 14 or 15 points.

(b) "Reasonably good color" means that the baked beans have a reasonably uniform color typical of the baked variety and style of pack. Canned baked beans that have a reasonably good color may be given a score of 12 or 13 points. Canned baked beans that score 12 points for color shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a partial limiting rule).

(c) "Substandard." Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 11 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6469 Consistency.

(a) *General.* The factor of consistency is determined two minutes after the product, without prior stirring or shaking, is emptied on to a flat surface.

(b) "Good consistency" means that the product shall form a well-rounded mound when emptied from the container and that the sauce shall be of such quantity and character that it clings to the beans with not more than a reasonable separation from the mound. Canned baked beans that have a good consistency may be given a score of 18 to 20 points.

(c) "Reasonably good consistency" means that the product shall form a mound that may tend to take the shape of the container with little leveling or may level itself substantially with a fairly large amount of sauce separation from the beans. Canned baked beans that have a reasonably good consistency may be given a score of 16 or 17 points. Canned baked beans that score 16 points for consistency shall not be graded above "U.S. Grade B" regardless of the total score for the product (this is a partial limiting rule).

(d) *"Substandard."* Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6470 Flavor.

(a) "Good flavor" means that the product has a good baked bean flavor and odor which is characteristic of the variety of bean and style of pack with all flavor components in proper balance. The product is free from objectionable flavors and objectionable odors. Canned baked beans that have a good flavor may be given a score of 18 to 20 points.

(b) "Reasonably good flavor" means that the product has a reasonably good baked bean flavor and odor which is characteristic of the variety of bean and style of pack with all flavor components in reasonable balance. The product is free from objectionable flavors and objectionable odors. Canned baked beans that have a reasonably good flavor may be given a score of 16 or 17 points. Canned baked beans that score 16 points for flavor shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a partial limiting rule).

(c) "Substandard." Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6471 Character.

(a) *General.* The factor of character refers to the degree of freedom from hard beans, mushy beans, beans with tough skins; and the overall texture of the product.

(b) "Good character" means that the baked beans have a good, typical texture, that may be slightly soft or slightly firm; and that the skins are tender. Canned baked beans that have a good character may be given a score of 18 to 20 points.

(c) "Reasonably good character" means that the baked beans have a reasonably good, typical texture, that may be firm or soft but not hard or mushy; and that the skins may be slightly tough. Canned baked beans that have a reasonably good character may be given a score of 16 or 17 points. Canned baked beans that score 16 points for character shall not be graded above *"U.S. Grade B,"* regardless of the total score for the product (this is a partial limiting rule).

(d) *"Substandard."* Canned baked beans that fail to meet the requirements of grade B may be given a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.6472 Absence of defects.

(a) *General.* The factor of absence of defects refers to the degree of freedom from extraneous vegetable material, loose skin, broken and mashed beans, and blemished beans; or any other defects that may affect the appearance or eating quality of the product.

(b) *Definitions.* (1) "Loose skin" means a skin or portions of a skin which have become separated wholly from the cotyledons;

(2) "Broken" means a cotyledon or portions of a cotyledon which have become separated; or a bean or portions of a bean with the skin or portions of the skin missing;

(3) "Mashed" means a bean that is crushed or flattened to the extent that the appearance is seriously affected;

(4) "Blemished" means a bean that is affected or damaged by any means to the extent that its appearance or eating quality is adversely affected;

(i) Slightly;

(ii) Materially;

(iii) Seriously; and

(5) "Extraneous vegetable material" means vegetable material common to the bean plant or other plants that is harmless upon eating and includes, but is not limited to, peas, lentils, cereal grains, and corn.

(c) "Practically free from defects" means that the canned baked beans comply with the allowances in Table I. Canned baked beans that are practically free from defects may be given a score of 22 to 25 points.

(d) "Reasonably free from defects" means that the canned baked beans comply with the allowances in Table II. Canned baked beans that are reasonably free from defects may be given a score of 20 or 21 points and shall not be graded above "U.S. Grade B," regardless of the total score for the product (this is a limiting rule).

(e) "Substandard." Canned baked beans that fail to meet the allowances for grade B may be given a score of 0 to 19 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

TABLE I—ALLOWANCES FOR DEFECTS IN CANNED BAKED BEANS—U.S. GRADE A

[Percent of net weight]

Defects	Maximum amount of defects permitted		
	Sample unit		Sample average
	Type (a)	Type (b), (c), (d)	
Loose skin, broken, and mashed	10	20	
Total blemished (slightly, materially, and seriously)	3	3	
Materially blemished	2	2	
Seriously blemished	1	1	
Extraneous vegetable material	([1])	([1])	1 piece per 80 oz net weight.

[1] No limit.

TABLE II—ALLOWANCES FOR DEFECTS IN CANNED BAKED BEANS—U.S. GRADE B

[Percent of net weight]

Defects	Maximum amount of defects permitted		
	Sample unit		Sample average
	Type (a)	Type (b), (c), (d)	
Loose skin, broken, and mashed	20	35	
Total blemished (slightly, materially, and seriously)	6	6	
Materially blemished	4	4	
Seriously blemished	2	2	
Extraneous vegetable material	([1])	([1])	1 piece per 20 oz net weight.

[1] No limit.

§ 52.6473 Determining the grade of a lot.

The grade of a lot of canned baked beans covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.83).

§ 52.6474 Score sheet for canned baked beans.

Container size

Container code or identification

Label

Net weight

Vacuum

Type

Style

Factors		Score points	
Color	15	(A)	14–15
		(B)	[1] 12–13
		(SSTD)	[2] 0–11
Consistency	20	(A)	18–20
		(B)	[1] 16–17
		(SSTD)	[2] 0–15
Flavor	20	(A)	18–20
		(B)	[1] 6–17
		(SSTD)	[2] 0–15
Character	20	(A)	18–20
		(B)	[1] 16–17
		(SSTD)	[2] 0–15
Absence of defects.	25	(A)	22–25
		(B)	[2] 20–21
		(SSTD)	[2] 0–19
Total score	100		

Similar varietal characteristics

Grade

[1] Indicates partial limiting rule.

[2] Indicates limiting rule.

Subpart—United States Standards for Grades of Canned Celery

SOURCE: 47 FR 5881, Feb. 9, 1982, unless otherwise noted.

§ 52.6571 Product description.

Canned celery is the product represented as defined in the applicable Standards of Identity for Certain Other Canned Vegetables (21 CFR 155.200) issued under the Federal Food, Drug, and Cosmetic Act.

§ 52.6572 Types of pack.

(a) Canned salad celery (acidified).

(b) Canned cooked celery.

§ 52.6573 Styles.

(a) *Diced* means canned celery consisting of stalks that have been cut into approximately cube-shaped units.

(b) *Sliced or cut* means canned celery consisting of stalks that are cut transversely into units approximately 19 mm (3/4 in) or less in length. Sliced may be one of the following sub-styles:

(1) *Straight cut* means canned celery stalks that are cut at approximately right angles to the length of the stalk.

(2) *Bias cut* means canned celery stalks that are cut at approximately 45° angle to the length of the stalk.

(c) *Chopped* means canned celery consisting of stalks that have been randomly chopped into units of varying sizes and shapes.

§ 52.6574 Definitions of terms.

As used in these U.S. standards, unless otherwise required by the context, the following terms shall be construed, respectively, to mean:

(a) *Basal portion* means the objectionable, fibrous material from the base of the celery plant or roots from below the base of the celery plant which affect the appearance or eating quality.

(b) *Blemished* means any unit of celery which is affected internally or externally by discoloration, insect injury, pathological damage or any other cause to the extent that the appearance or eating quality is affected:

(1) Materially; or

(2) Seriously.

(c) *Brightness* means the extent that the overall appearance of the sample unit as a mass is affected by dullness from improper processing or any other cause.

(1) Canned celery which has a good characteristic bright appearance typical of the type of pack may be assigned a score of 18 to 20 points.

(2) Canned celery which has a reasonably good characteristic bright appearance typical of the type of pack may be assigned a score of 16 or 17 points and shall not be graded above U.S. Grade B, regardless of the total score for the product.

(3) Canned celery that fails to meet the requirements for reasonably good characteristic bright appearance may be assigned a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product.

(d) *Character* refers to the uniformity of texture and freedom from coarseness, stringiness, or toughness, with consideration given to the type of pack.

(1) *Canned salad celery.* (i) *Good character* means celery which is uniform in texture, and is practically free from coarse, stringy, or tough units. The celery units are crisp and firm. Canned salad celery which has a good character may be assigned a score of 27 to 30 points.

(ii) *Reasonably good character* means celery which lacks uniformity in texture, and is reasonably free from coarse, stringy, or tough units. The celery units lack crispness and firmness. Canned salad celery which has a reasonably good character may be assigned a score of 24 to 26 points and shall not be graded above U.S. Grade B, regardless of the total score for the product.

(iii) Canned celery that fails to meet the requirements for reasonably good character may be assigned a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product.

(2) *Canned cooked celery.* (i) *Good character* means celery which is uniform in texture, practically free from coarse, stringy, or tough units, and is pliable and tender but not soft. Canned cooked celery that has a good character may be assigned a score of 27 to 30 points.

(ii) *Reasonably good character* means celery which lacks uniformity in texture, is reasonably free from coarse, stringy, or tough units, and is lacking pliability and tenderness, and may be soft but not mushy. Canned cooked celery that falls into this classification may be assigned a score of 24 to 26 points and shall not be graded above U.S. Grade B, regardless of the total score for the product.

(iii) Canned cooked celery that fails to meet the requirements for reasonably good character may be assigned a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product.

(e) *Chip* means any unit in diced style that has a volume that is less than one-half of a normal full size unit.

(f) *Color.* (1) *Good color* means canned celery color which is uniform in the range between green to white units characteristic of the type of pack. Canned celery which has a good color may be assigned a score of 18 to 20 points.

(2) *Reasonably good color* means canned celery color which lacks uniformity in the range between green to white units characteristic of the type of pack. Canned celery which has a reasonably good color may be assigned a score of 16 or 17 points and shall not be graded above U.S. Grade B, regardless of the total score for the product.

(3) Canned celery that fails to meet the requirements for reasonably good color may be assigned a score of 0 to 15 points and shall not be graded above Substandard, regardless of the total score for the product.

(g) *Defects* refer to the freedom from extraneous vegetable material, mechanical damage, celery leaf material, blemished units, and basal portions.

(1) *Practically free from defects* means celery which conforms with the applicable tolerances as specified in Table I. Canned celery which is practically free from defects may be assigned a score of 27 to 30 points.

(2) *Reasonably free from defects* means celery which conforms with the applicable tolerances as specified in Table I. Canned celery which is reasonably free from defects may be assigned a score of 24 to 26 points and shall not be graded above U.S. Grade B, regardless of the total score for the product.

(3) Canned celery that fails to meet the requirements for reasonably free from defects may be assigned a score of 0 to 23 points and shall not be graded above Substandard, regardless of the total score for the product.

(h) *Extraneous vegetable material (EVM)* means any objectionable vegetable material from other than the celery plant which is harmless.

(i) *Flavor and odor* means the freedom from objectionable flavor and odor of any kind.

(j) *Large piece* means any unit in diced style that is larger than a normal full size unit to the extent that it materially affects the appearance of the sample.

(k) *Leaf* means the celery leaf which is normally removed during processing and exceeds 0.64 cm (0.25 in) in the greatest dimension.

(l) *Mechanical damage* means any unit of celery which is adversely affected by harvesting or processing equipment and includes sizing imperfections.

(m) *Unit* means any individual slice, dice, cut, chop, heart, or piece of canned celery.

(n) *Varietal characteristics* mean the appearance, stalk characteristics and any other indicator of the variety of celery.

§ 52.6575 Recommended fill of container.

The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container of canned celery be filled with celery as full as practicable without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.6576 [Reserved]

§ 52.6577 Recommended sample unit size.

The requirements for all factors of quality are based on evaluation of: 900 g of drained product or the entire drained contents of a container, whichever is lesser.

§ 52.6578 Grades.

(a) *U.S. Grade A* is the quality of canned celery that:

(1) Meets the applicable requirements of Table I; and

(2) Scores not less than 90 points.

(b) *U.S. Grade B* is the quality of canned celery that:

(1) Meets the applicable requirements of Table I; and

(2) Scores not less than 80 points.

(c) *Substandard* is the quality of canned celery that fails to meet the requirements for *U.S. Grade B.*

§ 52.6579 Factors of quality.

The grade of a lot of canned celery is based on meeting the requirements for the following quality factors:

(a) Varietal characteristics;

(b) Flavor and odor;

(c) Brightness;

(d) Color;

(e) Character; and

(f) Defects.

§ 52.6580 Requirements for grades.

TABLE I—CANNED CELERY

Factors of quality	Grade A	Grade B
Varietal characteristics	Similar	Similar
Flavor and odor	Normal	Normal
Brightness	Good (18 to 20 points)	Reasonably good (16 to 17 points) [1]
Color	Good (18 to 20 points)	Reasonably good (16 to 17 points) [1]
Character	Good (27 to 30 points) (27 to 30 points)	Reasonably good (24 to 26 points) [1] (24 to 26 points) [1]
Defects: (Drained weight basis) [2]	Tolerance	Tolerance
1. Blemished:		
a. Materially	5% m/m	10% m/m
b. Seriously	2% m/m	4% m/m
2. Basal Portion:		
a. Fibrous material	2% m/m	4% m/m
b. w/roots attached	1% m/m	2% m/m
3. EVM	1 pc/900 g (31.7 oz)	2 pcs/900 g (31.7 oz)
4. Leaf:		
Diced; chopped	20 pcs/900 g (31.7 oz)	40 pcs/900 g (31.7 oz)
Sliced	10 pcs/900 g (31.7 oz)	20 pcs/900 g (31.7 oz)
5. Mechanical damage:		
a. Diced (chips plus large pieces)	40% m/m	50% m/m
b. Bias or straight cut [crushed units but not discolored plus units less than 3 mm (⅛ in)]	10% m/m	15% m/m
6. Other defects not specifically defined	Slightly affect appearance or eating quality	Materially affect appearance or eating quality

[1] Shall not be graded above U.S. Grade B.

[2] m/m indicates percentage by weight. Example: 10 percent m/m blemished material means 40 g in total 400 g drained celery.

NOTE.—Chips in diced style may be separated by using the sieve method. All units that pass through the meshes of a ⁵⁄₁₆ in (8 mm) sieve are counted as chips. The sieve to be used is a five-sixteenths (⁵⁄₁₆ in) sieve as listed in Table I of "Standard Specifications for Sieve," published March 1, 1940, in L.C. 584 National Bureau of Standards, U.S. Department of Commerce.

§ 52.6581 Sample size.

The sample size to determine the requirements of these standards shall be as specified in the sampling plans and procedures in the "Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products" (7 CFR 52.1 through 52.83).

§ 52.6582 Lot quality requirements.

A lot of canned celery is considered as meeting the requirements for quality if:

(a) The requirements specified in § 52.6580 are met; and

(b) The sampling plans and acceptance procedures in 7 CFR 52.38 are met.

FINDING AIDS

A list of CFR titles, subtitles, chapters, subchapters and parts, and an alphabetical list of agencies publishing in the CFR are included in the CFR Index and Finding Aids volume to the Code of Federal Regulations which is published separately and revised annually.

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